FINANCIAL PERFORMANCE OF NON BANKING FANINCIAL COMPANIES IN INDIA: AN ECONOMETRIC STUDY

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Deepak Kumar

(Registration No. 1821 of 09-09-2011)

Under the supervision of

Dr. P. Srinivasa Suresh

Department of Economics

School of Economics, Management and Information Science

North-Eastern Hill University Shillong-793022, India

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Department of Economics
School of Economics, Management and Information Science
North-Eastern Hill University Shillong-793022, India
28th August 2017

DECLARATION

I, Deepak Kumar, hereby declare that the subject matter of this thesis is the record of work done by me, and that the contents of this thesis did not form the basis for award of any previous degree to me, or, to the best of my knowledge, to anybody else, and that the thesis has not been submitted by me for any research degree in any other University/Institute.

This is being submitted to the North-Eastern Hill University for the degree of Doctor of Philosophy in Economics.

(Deepak Kumar)

Candidate

(Dr. P.S. Suresh)

Supervisor

(Prof. B. Panda)

Head of Department

DEDICATION

I dedicate this humble work to

INDIAN AIR FORCE

In which I was serving at the time of admission, and who teach me to stand strong in all adverse situation

And

My Parents

Shree Baliram Prasad & Shreemati Sona Devi

Who are the constant source of Inspiration and love at every walk of my life.

Deepak Kumar

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CHAPTER – I

INTRODUCTION

1.1 Background

Monetary transactions are facilitated by financial institutions such as banks, financial markets, finance instruments and services provided by the financial system. These institutions act as saving mobilisers and finance purveyors. Different types of financial services are provided by these institutions to serve the community. Furthermore, financial institutions act as intermediaries to investors and savers. Financial institutions are categorised into two types: banking and non-banking institutions based on the types of services offered. Banking institutions are characterised as creator of credit whereas non-banking institutions are highlighted as credit purveyors. Indian banking system comprises of two different types of banks: commercial and co-operative banks. Financial institutions in India such as Life Insurance Corporation (LIC), Unit Trust of India (UTI), and Industrial Development Bank of India (IDBI) (Pathak, 2011) are examples of non-banking institutions.

The services provided by financial markets include acquisition and sales of financial products and claims. The major participants involved in the supply and demand sides of these markets include agents such as dealers, brokers, lenders, borrowers and savers. Other parties include actors of law, contracts, communication agents and covenants. Furthermore, these markets are categorised as primary and secondary markets. In general, primary and secondary markets are also known as direct and indirect markets respectively. Primary or direct markets operate dealing with the issue of new financial claims or securities; hence, these markets are also known as new issue markets. Savings are mobilised in primary markets and supply

fresh capital to business units. On the contrary, secondary or indirect markets deal with the existing or issued or outstanding securities. These markets indirectly render securities that are issued on the primary markets, hence they contribute indirectly to additional capital supply (Cochrane, 2008).

Furthermore, financial markets are also categorised as capital and money markets wherein capital markets deal with long term capital claims with a maturity period above one year and money market dealing with short term claims with a maturity period less than a year. In the context of commercial banks, these financial institutions belong to both short and long term markets. Examples of money markets include Treasury Bills Market, Call Money Market, and Commercial Bills Market while capital market examples include Stock Market and Government Bonds Market. The assets of finance represent the payment of a sum as a claim in future and/ or periodic payment of the interest or the dividend. Payment of the sum also involves the repayment of the principal (Sewell, 2011).

The detailed list of Indian Financial system consisting of Financial Institutions is as under:

1.2 Financial Institutions (Intermediaries)

i) **Banking:** Reserve Bank of India (RBI), Commercial Banks, Co-operative Credit Societies, Co-operative Banks, Post-office Saving Banks,

ii) **Non-Banking:** Provident and Pension Funds, Small Savings Organizations, Life Insurance Corporation (LIC), General Insurance Corporation (GIC), Unit Trust of India(UTI), Mutual Funds, Investment Trusts, Investment Companies, Finance Corporations, Nidhis, Chit Funds, Hire-Purchase Finance Companies, Lease Finance

Companies, National Housing Bank (NHB), Housing and Urban Development Corporation (HUDCO), Housing Development Finance Corporation (HDFC), and other housing finance companies, Manufacturing companies accepting public deposits, Venture Capital Funds and National Cooperative Bank of India(NCBI) (Syal & Goswami, 2012).

1.3 Non-Banking Financial Companies (NBFC)

The growth rate of Indian economy is rising in an exponential scale and the requirements of the nation are increasing commensurately. The tremendous growth of the nation is vitalised by the growth of the industrial sector which always possess insatiable financial needs. This led to the emergence of Non-Banking Financial Companies (NBFCs) and has become an important finance segment in the country. These companies are heterogeneous group of institutions which perform as finance intermediaries in the provision of services such as accepting deposits, making loans and advances, leasing, hire purchase, etc. These intermediaries acquire funds as deposits or raise funds from public directly or indirectly and lend them to business units that require capital funds. Loans are lent to different trading units such as traders, small and medium scale industries and self-employed professionals. Financial sector in India is broadened with the advent of NBFCs and the products and services that are offered by these companies. The services offered by these companies are simpler than those offered by commercial financial institutions. Simple procedures, attractive return rate of deposits, flexible services, and timeliness in meeting all credit requirements are other advantages of NBFCs. Furthermore, these companies have now become the backbone of the nation in regulating the mission of finance inclusive of the given time (Ministry of Finance, 2012).

1.4 Statutory Definition under the RBI ACT

NBFI is defined under Sec. 45-I (f), Reserve Bank of India Act, 1934. As per the RBI Act, a "non-banking financial company" means,

(i) a financial institution which is a company;

(ii) a non-banking institution which is a company and which has as its principal business the receiving of deposits, under any scheme or arrangement or in any other manner or lending in any manner;

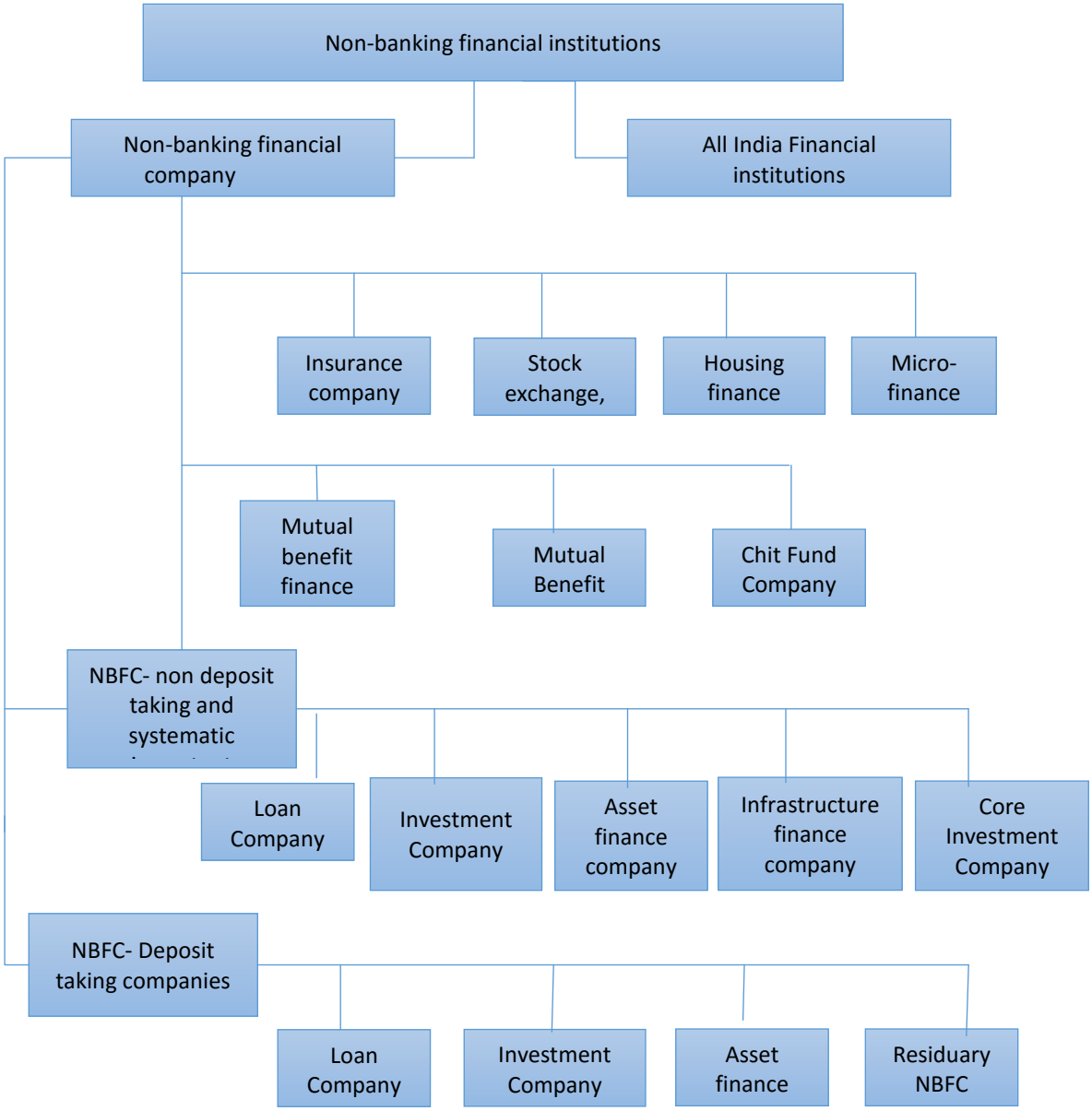
(iii) such other non-banking institution or class of such institutions, as the bank may, with the previous approval of the Central Government and by notification in the Official Gazette, specify (Khan, 2005).

Organisations (excluding commercial and cooperative banks) which offer financial services such as fund facilitation and act as monetary intermediaries between savers and investors are called as Non-banking financial institutions or companies. These institutions also offer products such as mutual funds (Khan, 2005). Any company that facilitates financial products such as hire-purchase finance, loan or mutual benefit finance and an equipment leasing fall under the category of NBFC; however, insurance or stock exchange or stock broking company and merchant banking companies are not NBFCs. The RBI (Amendment) Act, 1997 defines NBFC as an institution or a company whose principal business is to accept funds in the form of deposits under any scheme, arrangement or in any other manner, and to lend the same in any manner. Since, the amended definition provided insights for fund investments many loan and investment companies which were registered under the Companies Act are also included as NBFCs. In the Indian financial system, the financial intermediaries are classified as public owned, monopoly or oligopoly or monopolistic market structure and these systems are centralised. However, NBFCs are

small sized financial intermediaries other than commercial and cooperative banking institutions. In addition, these NBFCs are owned as private concern and are decentralised with relatively less competitive market. Some NBFCs are based on fund facilitation whereas others are based on providing financial services. In general, an NBFC company should belong to any of the following companies (Figure 1):

1) Loan Companies (LCs)
2) Investment Companies or ICs
3) Hire-Purchase Finance Companies or HPFCs
4) Lease Finance Companies or LFCs
5) Housing Finance Companies (or) HFCs
6) Mutual Benefit Financial Companies or MBFCs
7) Residuary Non-Banking Companies or RNBCs
8) Merchant Banks
9) Venture Capital Funds
10) Factors
11) Credit Rating Agencies
12) Depositories and custodial services (Pathak, 2011).

Figure 1.4.1: Classification of Non-Banking Financial Institutions



Source: Adopted from Karunagaran (2012)

1.5 Differences between NBFCs and Banks

The nature of the liabilities and the asset structure differentiate NBFCs from banking financial institutions. In commercial banks, liabilities consist of demand and time deposits wherein in NBFCs; ordinary demand deposits are not included. Demand deposits pertain to withdrawal of the same through cheques. Cheques are identified to be components of money and hence the degree of liabilities is the main differentiating

factor. In the context of assets, commercial banks hold credits in the range of short and long term and instruments such as cash credits, overdrafts and bills are used. On the contrary, the assets held by NBFCs are more specific in terms of the type of service required. For example, housing finance companies are specific towards provision of loans for housing purposes whereas hire finance companies operate mainly on financing to transport operations and requirements. However, the difference in the type of assets held by NBFCs and commercial banks does not clearly delineate the areas of operation of both since even commercial banks also provide loans for consumer credits and transport operations which were considered to be not the purview of these banks earlier (Lumpkin, 2009).

However, some functions and operations of both banks are NBFCs share similarities which blur the distinction between the two different types. Unlike banks, it is revealed that NBFC are not a part of payment mechanism. Similar to banks, they cannot generate money; however, due to several advantages over commercial banks, these NBFCs act as alternatives to commercial and cooperative banks (Onnela et al., 2006). Albeit the similarities existing in NBFCs and banks based on their operations, some differences still prevail which include: (i) Demand deposits are not accepted by NBFCs; (ii) An NBFC is not a part of the payment and settlement system and as such an NBFC cannot issue cheque drawn on itself; and (iii) NBFC depositors are void of deposit insurance facility of Deposit Insurance and Credit Guarantee Corporation which are facilitated by banks.

1.6 Current Scenario of NBFCs

The global economic crisis shook the entire world and India is no longer an exception. The striking rate of interests during the period October and November 2008 spread economic havoc. The collapse of the Lehman Brothers has inflicted some

damage to the ideas of investors. The serious economic downfall has impacted the NBFCs in India which is evidenced by the fall in finance demand as expansion plan for several businesses deferred. With the stock prices of many NBFC crashed, many companies terminated their operations in the finance sector. Many international NBFCs are closing down till date or selling their operation units in India (Dungey et al., 2003).

Though the conditions of NBFCs worsened, the operational strategies of these NBFC companies have improved over the years after the financial crisis. Economic and industry level experts claim that their operations have improved and are mature than they were in the previous decades. The intervention of RBI in this context further aided the mitigation of the negating effect of the credit crunch on NBFCs and other banks. In addition, it is also stated that the new strategies adopted by LIC Housing Finance aided in attracting new potential customers which further increased its share in the national mortgage market. The profitability was maintained at around 37% in the year 2009. However, HDFC a largest NBFC in the country witnessed a slow customer growth which is reasoned by competitive market, especially as the company had LIC Housing Finance as a competitor. Other reason includes the tight monetary conditions. Some companies which stood stable even during the credit crunch period, are Infrastructure Development Finance Company (IDFC) Power Finance Corporation (PFC) and Rural Electrification Corporation (REC). Though the country is evidenced by acute power shortages and increased demand for infrastructure projects, the growth rate of NBFCs is increasing. Vehicle financing was drastically affected during the economic crunch wherein the number of potential customers reduced. Since vehicle financing is based on asset-type businesses, the quality of asset did not suffer against other consumer financing businesses. However, once an NBFC named Shriram

Transport Finance maintained a steady growth which is contributable to the business model that is more stable than other companies of same sort (Bajpai, 2011).

In India, around 41,000 NBFCs were in operation in the year 1997. Both public and private limited companies were part of the NBFSCs. However, only very few companies report or file returns to the RBI/NHB. The reasons for the growth of these companies include,

a) Tailor made services to the clients;
b) Comprehensive regulation of NBFSCs;
c) High level of customer-orientation, lesser post sanction requirements, simplicity and speed of their services;
d) The monetary and credit policies have created an unsatisfied fringe of borrowers, i.e. the borrowers outside the purview of banks. The NBFSCs have catered to the needs of this section of borrowers;
e) High interest rates on deposits (Nath, 2013).

1.7 The Resources of NBFCs

Regulated deposits, exempted deposits, and net-owned funds form the primary resources of NBFCs. These deposits include any money that is received from a non-banking organisation in the form of deposit or loan. Other than usual loans and deposits, interoperate loans and sum borrowed from shareholders are also resources of NBFCs. Regulated deposits are acquired through some restrictions that are imposed by regulators. This type of deposits includes nonconvertible debentures, deposits received by companies from their shareholders, deposits guaranteed by directors, fixed deposits, and interoperates deposits. On the contrary, exempted type of deposits does not fall within the scope of regulatory measures. Such borrowings/deposits are exempted from regulations and include borrowings from banks and specified financial

institutions, money received from central/state/foreign governments, security deposits, advances received against orders and convertible debentures. Net-owned funds means the aggregation of paid up capital and free reserves.

1.8 Role of NBFCs

The operations of NBFCs as financial intermediaries are similar to that of financial institutions such as banks. NBFCs serve as intermediaries between investors and savers. In an economy, it is deemed that both surplus and deficit units exist. Transfer of funds with some rate of interest is brought by financial intermediaries where direct lending of surplus to deficit units is not feasible. Efficient flow of funds is not facilitated in direct transfer of surpluses to deficit units. High degree of risks involved in such transfers is mitigated by financial institutions and NBFCs which act as financial intermediaries and aid in the efficient allocation of resources in the economy. The advantage of financial intermediation lies with the fact that the expertise of these companies helps mitigate risks of finance by spreading the risks over large number of units. Hence, high return with low risk and liquidity is facilitated by the operation of NBFCs which benefits the saver (Aggarwal, 2015). The choice of loan is diverse with the borrowers when loan products of financial intermediaries are considered. It is considerable that the loan types offered by commercial and cooperative banks are for industrial, commercial and agricultural purposes. Small scale requirements such as transport, trading, acquisition of durable consumer goods, purchase and repair of houses or just for plain consumption are facilitated through loans offered by NBFCs. Since the activities of NBFCs are not regulated by the monetary authorities of the government, these companies do not necessarily be in consonance with the priorities of the nation. However, since these companies aid in the transfer of surplus to deficit units, the economy of the country is further enhanced.

Hence, NBFCs aid in the development of economy by transferring unproductive surplus into productive assets. These companies in this context have been termed as the economic measure for the development of the country (Bajpai, 2011).

The Reserve Bank of India expert committees identified the need of non-banking financial companies in the following areas:

- Development of transport and infrastructure sector
- Substantial employment generation
- Help and increase wealth creation
- Broad base economic development
- Irreplaceable supplement to bank credit in rural segments
- Major thrust on semi-urban, rural Areas and first time buyers/users
- Finance deficit units
- Huge contribution to the state exchequer

1.9 Regulation of NBFCs

The services offered by NBFCs are diverse and positively regulates Indian economy; however, several unhealthy practices were observed over the years of operation of these companies in the finance sector. This idealised the necessity for RBI to devise regulations for all NBFCs except HFCs. The enactment of RBI (Amendment) act 1997 stated that companies with net owned funds of Rs. 25 Lakhs and above have to register with the RBI. The BFS with the supervisory department of RBI began monitoring the operations of NBFCs from July 1995. However, the exempted HFCs are monitored by NHB (Mondal, 2015; Amutha, 2013). The major regulatory provisions are,

i. The minimum net worth funds of 25 Lakh and the NBFC should achieve the minimum net worth norm in 3 years or extended 3years more at the discretion of RBI.

ii. 10% and 15% should be maintained by NBFCs as deposits in liquid assets.

iii. They have to create reserve fund and transfer not less than 20% of their net deposits to it every year.

iv. The RBI directs them on issues of disclosures, prudential norms, credit, investments etc.

v. Nomination facility is available to depositors of these companies.

vi. Unincorporated bodies engaged in financial activity cannot accept deposits from the public from April, 1997.

vii. They have to achieve a minimum capital adequacy norm of 8% by March, 1996.

viii. They have to obtain a minimum credit rating from any one of 3 credit rating agencies.

ix. A ceiling of 15% interest on deposits has been prescribed for MBFCs or Nidhis.

x. The interest rate ceiling on deposits as also the ceiling on quantum of deposits for NBFCs (other than Nidhis) have removed, subject to compliance with the RBI directions and guidelines.

In order to protect the interests of the depositors, regulations were devised which primarily focuses on the NBFCs which accept public funds in the form of deposits (NBFS-D). However, significant amendments in the regulations on the operations of NBFCs further emphasised upon non-deposit taking NBFCs (NBFCs-ND). Systematic complications in the maintenance of balance sheet of a number of

companies necessitated such amendments. Systematically important NBFCs are subjected to limited regulations wherein the asset size of these companies should be above 100 crores. Regulatory policies were changed considering the activities of asset creating NBFCs. In December 2006, a reclassification was made wherein the new terms and conditions classified a new category of NBFC namely Asset Finance Companies (AFC). Companies which finance real/physical assets for productive/economic activity fall under this category. The norms of AFCs are different from the actual norms specified for other NBFCs. The revised classification includes loan and investment companies instead of equipment leasing, hire purchase, loan companies and investment companies earlier (Mondal, 2015).

1.10 Problem Statement

Non-Banking Financial institutions undertake financial operations but their resources are not directly acquired from the savers as debts. Rather public savings are mobilised and are rendered for finance related services which includes investment. These financial institutions are hence known as non-banking financial intermediaries (NBFIs) or investment institutions as they act as intermediaries to finance related activities. Other than these financial intermediaries, the financial system of India also possesses a large number of decentralised, small sized and privately owned financial intermediaries which operate in different and relatively small niches thereby enlarging the market and competition. While some companies limit their scope to fund-based business, others offer various types of financial services. In general, these companies are known as "non-bank financial companies (NBFCs)"; however, companies providing financial services are known as "Non-Bank Financial Services Companies (NBFSCs)" and companies restricting themselves to fund-based business are called "Non-Bank Financial Companies (NBFCs)" in specific (Agarwal, 2014). The Reserve

Bank of India, post 1996 has implemented regulations and supervisory measures to maintain transparency and discipline in decision making on NBFCs. These regulations are reviewed by the RBI most of the time and are amended whenever the sector requires a change. It is deemed that in the forthcoming years, there could be a cooperative functioning between both commercial banks and NBFCs due to the emergence of e-commerce and internet banking sector. The RBI is involved in the regulation of NBFCs that are engaged in finance activities such as Equipment leasing, hire purchase finance, loan and investment, Residuary Non-Banking Companies (RNBCs) and the deposit taking activity of miscellaneous non-banking Companies (chit funds) (Reserve Bank of India, 2015). As evidenced above, the role of NBFC is quite evident but also much understudied. For this purpose, the present study evaluates the financial performance of NBFCs (Bothra & Sayeed, 2011).

1.11 Research Objectives

1. To examine the financial viability of different types of NBFCs in India
2. To measure the operating and X-efficiency of NBFCs in India
3. To compare the financial performance of different categories of NBFC in India
4. To forecast the financial viability of NBFCs in India

1.12 Research Questions

1. What is the financial viability of different types of NBFCs in India?
2. What is the operating and X-efficiency of NBFCs in India?
3. What is the financial performance of different categories of NBFC in India?
4. What is the future of the financial viability of NBFCs in India?

1.13 Hypotheses

The following hypotheses are tested in the present study.

H_0 (1) **-** There is no significant relationship between NPR, OPM CR, DER, FATR, ATR and ROA of loan companies

H0 (2) **-** There is no significant impact of NPR, OPM CR, DER, FATR, ATR on ROA for loan companies

H0 (3) **-** There is no significant relationship between NPR, OPM CR, DER, FATR, ATR and ROA of investment companies of NBFCs

H0 (4) **-** There is no significant impact of NPR, OPM CR, DER, FATR, ATR on ROA for investment companies of NBFCs

Where, NPR - Net profit ratio, OPR - Operating profit ratio, CR - Current Ratio, DER – Debt equity ratio, FATR – Fixed asset turnover ratio, ATR – Asset turnover ratio, ROA – Return on assets

1.14 Statistical Methods

i. Regression analysis: For the present study, regression analysis will be employed in order to identify the factors that account for the failure or success of NBFCs with respect to the viability, profitability, granting loans and advances, recovery of loans and amount of NPA.

ii. Data Envelopment analysis (DEA): Data envelopment analysis is a linear technique and non-parametric method that measures the performance of organisationalunits like banking and non-banking financial institutions. The DEA in this regard identifies three types of efficiencies namely the technical,

cost and allocative efficiencies. Efficiency here may be defined as the success with which one organisation uses its resources to produce an output. Cost efficiency is attempting the same amount of output at a reduced cost, while technical efficiency is the ability to reduce variable inputs to produce the same level of output. Allocative efficiency is defined as the ability to choose the right mix of input required.

1.15 Scope of the Study

The present study focuses on the financial performance of Non-banking Financial Companies (NBFCs). This is analysed by the data obtained from governmental reports of the for the period 2001 to 2015 in order to derive and determine the role that NBFCs play in the economic development of India. The study also forecasts the financial viability of these NBFCs by measuring the financial performance of 50 companies from this sector. The study further measures each main subset of this sector. The scope of the study thus remains to enable to add to the limited existing body of literature on the overall viability of NBFCs on the future of the Indian economy.

1.16 Data and Variables

Obtaining the data sets for the purpose of the study involved a comprehensive search of the databases of IBA, website of RBI and SEBI bulletins, data bank of CMIE, reports and statistical data and tables published on NBFC's in different journals. The study proposed to use the (balance sheet) data for 15 years from the year 2001 to 2015. This period was chosen to represent the upward trend of NBFC's which occurred most in this period of time.

For analysing the data considered in the present study, the following variables have been used.

Operating profit margin**,** Net profit ratio**,** Current ratio**,** Debt equity ratio**,** Fixed asset turnover ratio**,** Asset turnover ratio, Return on assets.

1.17 Significance of the Study

The study bears significance that the non-banking sector has not been given importance that it is rightfully deserved in the performing and operating economy. This may be attributed to the attention that was focused on the banking sector. The findings of the study will enable to shed light on the existing structure, role and contribution of the NBFCs towards the economic development of the nation. The findings also bear significance to the contribution of previous literature. The literature on the role of these NBFCs in India is limited at present. The findings of the study bear implication to future research in the same aspect.

1.18 Chapterization

The research study report is structured as follows:

Chapter I: Introduction: this section contain the introduction to the topic along with the background of the study, the problem statement, research objectives, research questions, hypothesis, the statistical methods of analysis and the scope and significance of the study. The chapter also contains a note on the chapter divisions of the study.

Chapter II: Literature Review: the chapter discusses the previous literature that has been presented by different authors within the context of the role and evaluation of NBFCs in India.

Chapter III: NBFCs in India: An Overview: This chapter presents a detailed overview of the functioning of the banking as well as the non-banking financial companies within the purview of India. The chapter also assesses the regulatory framework which surrounds the governance of these NBFCs and their growth.

Chapter IV: Data and Methodology: this chapter details the research design and strategy adopted. In addition, the research philosophy is also included through which the nature and type of data collected are determined. The chapter also encloses the manner in which the data is analysed and how the findings may be derived.

Chapter V, VI, VII: Financial performance of NBFCs using regression analysis, DEA, and comparative analysis: this chapter very specifically encloses the results of the data collected. The results are presented in tabular and graphical format along with the interpretation of data

Chapter VIII: Summary and Conclusion: this chapter discusses the findings of the present study in comparison with the previous studies. From the findings, conclusions are drawn and recommendations to the future role of NBFCs are discerned.

CHAPTER - II

LITERATURE REVIEW

2.1Introduction

The present chapter examines literature pertaining to NBFC in the India and abroad. In this regard, the following studies were examined and the key findings are highlighted. The research gap in previous researches was provided in section 2.3. In addition, a summary to the entire chapter is provided in section 2.4.

2.2 Previous Studies

Bhole (1992) has studied the growth pattern, problems, prospects and impact of NBFCs on financial market. He maintained that as any nation become develop, NBFCs become more and more important. He compared the business volume and profitability ratio of Commercial Banks and NBFCs at aggregate level. He uses only the profitability ratio for the purpose.

Saggar (1995) has examined the financial performance of 10 leasing companies at disaggregate level and compared with other group of NBFCs for a period of 1985-90. The simple method of ratio analysis has been used to compare the financial performance. The study by Saggar does not reflect the overall performance of NBFCs as it is based on selected 10 companies.

Kantawala (1997) examined the relative financial performance of different groups of NBFCs for the period 1985-86 to 1994-95 in terms of profitability, leverage and liquidity. A significant difference in the profitability ratios, leverage ratios and liquidity ratios of various categories of NBFCs was observed from the analysis and concluded that different categories of NBFCs behave differently and it is the

entrepreneur's choice in the light of behavior of some the parameters which go along with the category of NBFC.

A study by Harihar (1998) throws light on overall performance of all NBFCs taken together in terms of cost of debt, operating margin, net profit margin, return on net worth and asset turnover ratio. It is revealed the aggregate performance of NBFCs which does not throw light on the financial performance of different group of NBFCs. The study has used only few ratios to analyse the financial performance.

Machiraju (1998) studied the financial performance of few selected categories of NBFCs by using ratio analysis method. The study used only the Profitability ratio. The study did not throw any light on the overall performance of all categories of NBFCs.

Guruswamy (1998) has studied the financial performance of NBFCs for the purpose of credit rating of a few numbers of NBFCs by using the methods of ratio analysis. The study used only Leverage ratios like Borrowing/Total Assets, Bank Borrowing/Total Assets, Net Worth/Total Assets, Bank Borrowings/Borrowing, Debt/Total Assets, Debt/Net Worth, Loan to Current Assets, for the purpose of study.

Kantawala (2001) has studied the financial performance of NBFCs by using the method of ratio analysis and one way analysis of variance (ANOVA). He used the Profitability ratios, leverage ratios and liquidity ratios of ten years from 1985-86 to 1994-95 of different categories of NBFCs to compare the performance. To overcome the assumption of normal distribution in case of ANOVA, KrushkalWallies test is also applied by Kantawala but the study has not applied the modern technique of analysis like Data Envelopment Analysis (DAE).

Bakker (2004) studied the development of NBFCs in European Union. By using the ratio analysis method, he showed that NBFCs are more profitable in long run. The study used only the liquidity and profitability ratios.

Khan (2005) studied the Product options of NBFCs in Bangladesh and concludes that NBFCs with multiproduct are more financially stable in comparison with NBFCs in single business. The study used simple method of ratio analysis. Only few ratios had been taken for the study.

Ahmed and Chowdhury (2007) studied the problems and prospects of NBFCs in Bangladesh. By employing the method of ratio analysis, he pointed out the asset liability mismatch faced by NBFCs in Bangladesh. The study used only the leverage ratios for the purpose.

Harikrishnan (2008) in their study recognized the real issues and issues in dealing with the receivable in appreciation of vehicle financing of NBFCs. For this study, information has been gathered from the essential and auxiliary hotspots for the period 1999-2007. Essential wellsprings of information are NBFCs and their channel accomplices i.e., the borrowers of NBFCs and delegates who are the merchants of the vehicles and different sites, Reports, Diaries, and Distributions and so forth are the optional sources. Quantitative and subjective strategies have been embraced in this learn at various stages and recommended that there ought to be more straightforwardness in managing the borrowers and financing cost computation, the method of transfer of reprocessed vehicle should be completely decentralized to branches for showing signs of improvement value, end the act of transitory enlistment of vehicles, sound relationship amongst merchants and NBFCs ought to be enhanced, and so forth.

Vadde (2011) analyzed the performance of non-government financial and investment companies (other than banking, insurance and chit-fund companies) during the year 2008-09. The segment of financial and investment companies in the private corporate sector was found to be highly skewed. Thus, the analysis was confined to 1,211 companies. It was observed that growth in income, both main as well as other income, decelerated during the year 2008-09. Though, growth in total expenditure also decelerated, it was higher than the income growth. The growth in expenditure was mainly driven by the growth in interest payments. As a result, operating profits of the select companies declined along with diminishing profitability during 2008-09. Business of select non-banking financial and investment companies expanded at a slower pace during 2008-09. The share of external sources in total sources declined during 2008-09 when compared with the previous years. A substantial portion of funds raised during the year was in the form of borrowings. Other significant portion of funds was in the form of raising fresh capital from the capital market. Major portion of the funds raised during the year was deployed as loans and advances in the credit market. However, its share in total uses of funds decreased. The share of 'Investments' in total uses of funds increased during 2008-09 on account of investments in the mutual funds and shares and debentures of other Indian companies.

Khalil Ahmed and Group (2011) dissected the budgetary execution of those NBFCs which are giving the administrations of speculation consultative (IAS), resource administration (AMS), IF for two year from 2008 to 2009. Proportion investigation strategy has been utilized to break down the money related execution of non-bank monetary organizations. The study presumes that the monetary execution of

NBFCs was better in 2008 when contrasted with the general decrease in 2009 brought about by numerous elements.

Samal and Pande (2012) inspected on innovation Suggestions in NBFCs by utilizing essential and auxiliary information and utilizing both unmistakable and explanatory Examination outline. The creators reasoned that innovation on administrations and innovation administer to recipient have all the more affecting probability in expanding recipient fulfilment. Be that as it may, NBFCs must look to all different components to expand its probability in innovation, as new recipient are more acclimated with new innovation to spare their time and vitality.

Sornaganesh and Soris (2013) explored the subject of NBFC in India" to break down the gainfulness position of 5 test NBFC organizations, as STF, SF, BF, and M&MF for the period from April 2008 to Walk 2012, utilizing Proportion Examination of gathering information from the Yearly Reports and the Accounting reports of the example organizations. The study uncovers that SF has performed better regarding Income Per offer (EPS) trailed by STF, BF, CF and M&MF however STF and M&MF are much better than other in NPM.

Perumal and Satheskumar (2013) concentrated on NBFC’s by examining the Asset reports and salary proclamations of two specimen organizations, viz., Sundaram Fund Restricted and Lakshmi General Account Constrained for the period 2007-2012 utilizing essential and optional information. The study was performed utilizing different measurable systems, for example, normal, standard deviation, co-proficient of variation, pattern examination, file number, and so on and reasoned that the commitment of NBFCs to monetary improvement is exceedingly huge and they have to incorporate it with the standard budgetary framework and RBI ought to be vested with more energy to screen NBFCs in a successful way.

Sowndharya and Shanmugham (2014) examined the profitability, efficiency and turnover aspects of the selected NBFCs. The findings indicated that the NBFCs differ significantly in terms of Profitability and Leverage indicators from one another.

Kaur and Tanghi (2013) researched on “NBFC’s Part and Future Prospects" with a centre to break down part and hugeness of NBFCs in India. The paper infers that NBFCs need to concentrate more on their centre qualities and should always attempt to hunt down new items and administrations so as to survive.

Makhijani (2014) offers the opinion that the course of the most recent couple of years the non-banking financial companies (NBFC) part has increased critical points of interest over the saving money framework in supplying credit under-served and unbanked territories given their compass and specialty plan of action. Be that as it may, off late the Store Bank of India has presented and proposed different changes in the current administrative standards administering NBFCs with a perspective to carry NBFCs controls at standard with the banks. The continuous and proposed administrative changes for the NBFCs regarding expanded capital sufficiency, harder procurement standards, expulsion from need division status and changes in securitization rules could cut down the productivity and development of the NBFC segment. NBFCs should introspect and re-evaluate their plans of action as they will now need to battle stringent administrative standards as well as need to confront the test of increasing expense of assets, panic capital and direct rivalry from banks.

Shakya (2014)distributed a working paper where they opine that NBFC’s are pioneer in their money sending, openness to the business sectors and others to tally. NBFCs are known for their higher danger taking limit than the banks. Notwithstanding being an organization of fascination for the speculators, NBFCs have assumed a huge part in the money related framework. Numerous specific

administrations, for example, figuring, investment back, and financing street transport were championed by these organizations. NBFC area has all the more essentially seen a reasonable level of combination, prompting the development of huge organizations with differentiated exercises. In any case, the late monetary emergency has highlighted the significance of augmenting the centre of NBFC controls to make specific note of dangers emerging from the administrative crevices, from arbitrage opportunities and from between connectedness of different exercises and elements connected with the money related framework. The administrative administration is lighter and unique in relation to the banks. The enduring increment in bank credit to NBFCs over the late years implies that the likelihood of dangers being exchanged from all the more daintily controlled NBFC part to the saving money division in India can't be discounted.

Thilakam and Saravanan (2014) state Monetary intermediation is an essential capacity of Banks, NBFCs in the post change period in India is described by marvellous development of NBFCs supplementing the part of banks in preparing subsidies and making it accessible for speculation purposes. Amid the most recent decade NBFCs have experienced wide unpredictability and change as an industry and have been seeing significant business change throughout the most recent decade as a result of business sector flow, open opinions and administrative environment. To assess the soundness of NBFCs in Tamil Nadu over 10 years, the creators made an endeavour of CAMEL criteria for examination of chose Organizations. In view of discoveries the recommendations were offered to conquer the challenges face by chose NBFCs in their improvement.

Arunkumar (2014) has made an endeavour on the subject of NBFC’s which is a survey based study and in the wake of watching twelve investigations of various

creators he presumed that because of the directions of the Reserve Bank of India, still the NBFCs are not going into more credit and proposed to the NBFC credit arrangement to decrease rates of premium. The study finds an exploration crevice which is evaluation of execution of NBFCs in India. Mohan (2014)depicted the NBFC in India with respect to sorts, needs, difficulties, and significance in monetary incorporation and recommended to enhance Corporate Administration Guidelines and reasoned that NBFCs have ended up being motors of development and are indispensable part of the Indian monetary framework, upgrading rivalry and broadening in money related division, spreading hazards particularly on occasion of budgetary misery and have been progressively perceived as correlative of saving money framework at focused costs.

Mondal (2015)compared the growth between Banks and NBFCs in India wherein the contribution of both these entities to the growth of the nation's economy was examined. Data was collected from secondary data sources wherein statistical analysis is performed on the collected data. The results of the previous research revealed that in the time frame of 2006 to2013, there is an increase in the total assets of NBFCs than Banks in India wherein the contribution of the NBFCs was also witnessed to increase GDP. Das (2015) compared the performance of growth of Non Banking Financial Companies with Banks and their contribution in the Indian economy. For this study, data have been collected from secondary sources and simple statistical tools, tables have been used. The results showed that during the study period, i.e. from the year 2006 to 2013, total assets of Non Banking Financial Companies have been increasing at higher rate than the Banking Sector in India and also contribution to GDP of NBFC sector has been increasing more steadily than that of banks. The return on assets was found to be better than that of banking sector.

NBFCs have been growing at a steady rate and its growth rate was higher than that of banking sector. Proportion of credit provided by the NBFCs to infrastructure sector was also higher than that of banks during the study period.

Pellissery and Koshy (2015) analyzed the financial performance of the selected groups of NBFCs and banking companies during the periods 2007-2011. From the study it was found that NBFC's are showing better position in the capital markets than the selected banking companies. The companies differed significantly in terms of their financial performance indicators from one company to another. This may be due to the different services they provide and the differential interest rates. The study found no significant differences in the management of financial performance of each of the companies, except marginal deviations in some cases during the study period. Earnings per share of the selected companies also increased, whereas the operating profit per share of all companies showed an increasing trend from the year 2007 to 2010 and depicted a slight dim in the year 2011. Overall, the NBFC's have performed well, as and when compared to the banking companies.

Das (2016) also examined the growth and performance of NBFCs by comparing the same with that of Indian Banks. Data was collected from the Reserve Bank of India website wherein the time period considered for the research is 2006-2014. For the analysis, statistical table, line chart and column charts were used. During the study period considered, it is revealed that there is an increase in the proportion of NBFCs when compared to the banking sector. Kaushal (2016) examined the impact of NBFCs to the growth of Indian economy. The previous researcher conducted a descriptive research paper based on secondary data wherein it was revealed that the financial health and profitability of Indian NBFCs have improved

over the years; however, NBFCs should open venues for overseas investors to make tie-ups in the form of technology transfer and requisite expertise.

2.3 Research Gap

The NBFCs assume a huge part in meeting monetary necessities of the medium measured and little estimated commercial enterprises and advancement of Indian economy by implication. Then again, approaches of NBFCs are additionally given speculation security to the speculators. It is highlighted that because of the directions of the Reserve Bank of India, still the NBFCs do not develop more credit. It is proposed to the NBFC credit strategy to lessen rate of interests, which serves to little ventures to get advances for their distinctive capital prerequisites. The studies made above demonstrates that the exploration in NBFCs is not at all that dynamic with the same number of the distributed and published papers that indicate just the periphery of the NBFCs. Very few, meager, limited and sporadic studies have been done on NBFCs in India and even abroad. Even the available study did not focus on the overall performance of the NBFCs as a whole. Moreover in term of methodology only traditional ratio analysis was employed to assess the performance. Due to this, as well as with the progress of the India, the study aims to bridge the dearth in the literature by exploring the case of NBFCs in India in greater detail. The present study overcomes these drawbacks by analyzing the financial performance of NBFCs in India by using traditional Ratio analysis as well as modern non parametric technique such as Data Envelopment Analysis (DEA).

2.4 Summary

From the above review it can be stated that the NBFC's form a vital part of the financial system in India, especially as per the recent policy measures. Additionally,

regulation that is activity based is most likely to lead to cost the rationalisation of the cost of compliance so as to create a model that fits more appropriately between both the regulations as well as the regulatory activities. However, the areas of restriction that occurs on debentures funding, loss of priority sector, securitisation and on-lending continue to restrict the funding ability of NBFC's. With the almost unenthusiastic growth environment coupled with regulatory constraints have made the banks realise as well as notice the sector of direct and indirect lending to the priority sector borrowers. However, it has been stated that this has been pegged for a reversal once the need for project finance and large scale funding is commenced. Here, banks have a different costing structure and have revamped to accommodate for a different customer base. In this view, the NBFC's have focused their businesses to target consumers so to as make their enterprises more profitable in the priority borrower segment. The segregated approach to the licensing of the finance sector for the different types of banks can help create the right dynamic with the increase in the market penetration through making available a wider range of products, thereby paving the way for the growth of NBFCs. This can be deemed difficult for the larger players in the market as the move from banking to non-banking firms without the adequate regulatory framework can prove to be risky. In this view, even though the differential licensing will eventually come to be accepted, the NBFCs can carry on business that is lucrative especially to those organisations that are focused on assets and others that have access to viable sources of funding. In this context evaluation of the financial performance of the NBFC's in the context of the growing economy can help to enable a stable regulatory environment which further provides for the growth of the NBFCs.

CHAPTER - III

OVERVIEW OF NBFCs IN INDIA

3.1 Introduction

As per Reserve Bank of India (RBI) Act, 1934, Non-Banking Financial Companies (NBFC) is registered under company act and offer most of the banking services, such as loans and credit facilities, acquisition of shares/stocks/bonds/debentures/securities issued by government or local bodies, private education funding, retirement planning, marketable securities like leasing, hire-purchase, trading in money markets, and Chit fund activities. They play a vital role in the Indian financial structure and system. Small companies and borrowers lend money from these NBFC's at the local level. These financial companies act as an alternate to the banking systems and increase the level of competition and diversity in the financial sector. Research insists that the banking sector has always been highly regulated however simplified in the terms of sanction procedures, flexibility and timeliness for the purpose of meeting the credit needs and low cost operations. This has occurred as a result of the NBFCs getting an edge over banks in providing funding (Arunkumar, 2014).

The role of NBFC is appreciable at all times, wherein India too is well known for banking operations which are also predominant. The clients who as per the bank norms are rejected for availing loans or other services approach these NBFC's for the same services that are willingly offered to them. In light of this, the growth of NBFC's in the last few years has been exceptional and the overall size of NBFC's assets has increased to about 14% of that of the commercial banks excluding RRB's. The main criteria of NBFC are that they do not involve any organization whose main

business is of agricultural/industrial/purchase or sale of any goods (excluding securities)/construction of properties that are immovable.

Residuary Non-Banking Company (RNBC) is also another form of NBFC which is involved in attaining deposits under a particular scheme/lump sum/instalments by contributing to the borrowers in their own way. Reserve bank of India act 1934 (section 45-1A) emphasizes all NBFC's to attain registration certificate before commencing their business. In some cases like venture capital fund/Merchant banking/stock broking organizations registered with SEBI or an insurance company with IRDA registration certificate are excluded from this above specified rule of RBI (Volume 01, No.8, August 2015, Page 2).

According to RBI, NBFC's can be classified as following: AFC - Asset Finance Company; IC - Investment Company; LC - Loan Company; IFC - Infrastructure Finance Company; CIC-ND-Sib- Core Investment Company (Systematically Important); IFD - Infrastructure Debt Fund; NBFC-MFI - NBFC-Micro Finance Institution; NBFC-Factors - Non-Banking Financial Company-Factors.

Micro, Small and Medium Enterprises (MSME) play a lead role in attaining financial support from the NBFC's. Apart from MSME, they also provide support to the public by providing small loans, two wheeler/four wheeler/truck loans, finance for farm equipment, and unsecured working capital financing. If these services are needed by the public from NBFC, they have to undergo only easy and uncomplicated process for sanction of loans and disbursement of credit. Flexibility in repayment of loans, on time is considered to be the main features that attract the customers towards NBFC. Even though NBFC's lend and make investments there are certain differences with respect to the banking sector as given below:

1. NBFC's cannot accept demand deposits

2. NBFCs do not form part of the payment and settlement system and cannot issue cheques drawn on itself

3. Deposit insurance facility of Deposit Insurance and Credit Guarantee Corporation is not available to depositors of NBFCs, unlike that in the case of banks.

Across the world, much research has been done to review the functions and policies of NBFC are helpful in increasing the power and fame among people.

3.2 Financial System of India

3.2.1 Overview

In the current decade an extensive development has been made in India with respect to the growth rates with an average in excess of 8 per cent for the last four years and also the stock market growth is over three-fold with a rising inflow of foreign investments. In India during the year 2006, total equity issuance entered $19.2bn which is considered to be up to 22%. Merger and acquisition volume increased to 38% ($27.8bn) driven by 371 per cent increase in outbound acquisitions exceeding inbound deal volumes for the first time. Likewise, debt issuance reached up to 28% ($13.7bn) from a year earlier. Bank of New York survey says that the Indian companies were also actively participating in the service of NBFC by issuing depositary receipts in the early half of 2006 (Ratti, 2012). The main challenge that India faced in first few decades of new millennium are entirely different from those it is experiencing with for decades after independence. Foreign exchange markets underwent liberalization and globalization which gave a new life and also new challenges to them. Commodity trading emerged from scratch to gain attention and scale among public. At this time, banking domain has moved from an era of rigorous

control and government intrusion to a more market-governed system. As a result, many foreign banks emerged in India along with many private banks which made their presence felt in a strong manner. Microfinance has started emerging over these years and was considered as an important factor in Indian financial structure. This increased its outreach by providing required financial services to millions of poor Indian household people (Kihara, 1962).

3.3 Brief History of Indian Economy

India as the second highest populated country (1.11billion) and fourth largest economy in Public Private Partnership (PPP) terms is closely at the heels of the third largest economy, Japan. After attaining independence in 1947, India was one of the world's poorest country (the manufacturing sector accounted for only one 2 tenth of the national product) but also considered as best formal financial markets in the developing world, with four famous functioning stock exchanges. The Tokyo Stock Exchange (oldest), which gave a clear defined rules of government, trading and settlements, a well enhanced equity culture, a banking structure with clear lending norms and procedures for recovery following the better corporate laws (Jayanthi, 2010).

During this time, many corporate laws and laws protecting the rights of investors were built along with Indian companies' act 1956. Socialism played a main role after independence which gave an outcome of licensing, protection and in turn a wide spread of corruption. In 1990-1991, India suffered from severe payment crisis which guided in an era of reforms comprising of deregulation, partial privatization of state sector enterprises and liberalization of external sectors. India grew at an average of 3.5% ("The Hindu rate of growth") and then increased to 5.6% since 1980's after independence. In the middle of 1970's the growth began and the annual GDP growth

rate of 5.9% (based on inflation adjusted, constant prices) prevailed during 1990 to 2005. This growth rate is considered to be the second largest among the world economies behind china's 10.1%. India's GDP was generated in the service sector during 2004 and 52% was the outcome from it. While, the manufacturing (agriculture) sector produced only 26% (22%) of GDP. With respect to employment, agriculture was accountable for about two-thirds of half of billion labour force which indicated the poor production and unemployment. Majority (90%) of labour force worked in the unorganized sector (Jayanthi, 2010).

3.4 Indian Economy and Financial Markets since liberalization

In the early 1990's India faced a major switch over in economic terms due to the emerging of economic reforms. According to the terms of globalization unorganized sector comprises of: 1) All the enterprises except companies registered under Section 2m(i) and 2m(ii) of the Factories Act, 1948, Cigar Workers (condition of employment) Act, 1966; and 2) all enterprises except those run by the central/state government and local bodies or Public Sector Enterprises. 3 The deregulation has breathed a new life to private business and the long-protected industries in India are now facing the challenge of foreign competition as well as the opportunities of world markets. In 1980, the GDP has doubled in constant prices due to the continuous increase in growth rate. The conclusion of 'License Raj' has removed major obstacles from the way of new investments (Sinha et al., 2015). The unambiguous ascent in the ration following the concept of liberalization leads to greater heights in economy. The average rate of inflation with respect to price stability has been closer to the preceding half decade except in the last few years when inflation has decreased to significantly lower levels. There was a major structural change in India's macro economy due to the decline in the interest rates (Saha, 2012).

Globalization, deregulation in the outside world and the external sector played a vital role in transforming Indian economy in the past twelve years. The quick and easy measure of the rise in India's integration with the world economy is a standard way of 'openness'- the need of foreign trade in national income. Imports increased at a consistent level which in turn improved the exports and vice versa. 'Export pessimism' marked India's foreign trade policy as a powerful factor. Trade deficits have been continued after liberalization. Foreign investments in India flowed as well as FDI (and more recently in the form of External Commercial Borrowing (ECBs) by Indian firms) have been substantial and consistent. Over the years, both these flows improved the growth rates in decent and average levels. FDI flow is less elusive compared to portfolio flows. Increase in the concern of 'hot money' prevailed into the country due to portfolio flows. A recent study by Morgan Stanley holds "bureaucracy, poor infrastructure, rigid labour laws and an unfavourable tax structure" in India as responsible for this poor relative performance. This difference should be viewed more as indicative with respect to the future growth in the opportunities of FDI flows provided India follows its second generation reforms and should not be cryptic in India's significant achievement of attracting foreign investments since liberalization. As a result of substantial capital inflows, the foreign exchange reserves situation for India has improved beyond the greatest imagination of any pre-liberalization policymaker. Currently, the RBI has a foreign exchange reserve crossing two hundred billion US dollars, which was impossible at the start of liberalization. Indian rupee also attained more stability against the major world currencies. The increase in the control on rupee in terms of liberalization, considerable amount of value also increased. The value of the floating rupee stabilized itself during the late 1990's and has appreciated against the currency US dollar within few months. In other words, the

rupee is currently undervalued against the dollar as it is managed by RBI (Temperton, 2015).

Morgan Stanley in 2004 says that, ‘A lot has changed in the world beyond India’s borders during these years’. The second largest economy Japan faced a long recession over a period. In 1997, the Asian Crisis smashed South-East Asia and Korea. Europe has entered into a union creating the Euro that now rivals the US dollar in importance with respect to world currencies. Likewise Russia, Argentina and turkey also witnessed huge financial crisis. The birth of internet made stock markets in US and other countries to huge heights before crashing back down. India has appeared largely unmarked from the Asian crisis. Many people attribute this insulation to the control of capitals that prevailed continuously in India. Indian financial markets became attuned to international markets. It gave birth to the financial integration of India with other parts of the world. The history of India’s stock exchanges (4 at independence to 23 today) and around 10,000 listed firms, the size and the role in terms of allocating resources of the market are dominated by the banking domain similar to other countries. In the early 1980’s, equity markets were not important as a funding source. India’s market capitalization to GDP ratio raised about 3.5% in the early 1980’s and to 59% increase in 2005. This gave a ranking of 40 among 106 countries. We can infer that the total bank deposits ($527 billion dollars) are equal to 52% of GDP in 2005, and comprises of three-quarters of the country’s total financial assets. In a series of research papers in the late 1990s, La Porta, Lopez de Silanes, Shleifer and Vishny (LLSV) have empirically demonstrated the effects that the investor protection embedded in the legal system of a country has on the development and nature of financial systems in the country. They also insist that 6 common-law countries provide better investor protection than civil law

countries leading to “better” financial and systemic outcomes for the former including a greater fraction of external finance, better developed financial markets and more dispersed shareholding in these countries as compared to the civil law countries. The LLSV averages of financial system across different legal system serves as a path through which an individual country’s financial system can be compared. With respect to size, India’s banking domain is much smaller than the other LLSV sample countries, even though its efficiency (overhead cost as fraction of total banking assets) compares favourably to most countries.

India’s stock market size (total market capitalization with fraction of GDP) is larger than the banking sector, but it is below LLSV average. But, in terms of floating supply of the market, the Indian stock market is only half of the banking sector. The two factors ‘structure activity and structure size’ measures whether the financial system is powered by bank or stock market. India’s activity size figure is below even with the average of English origin countries as India has a market dominant system. In terms of Structure efficiency of the market vs. banks, India’s banks are much more efficient than the market and this dominance is stronger than for the average level of LLSV countries (Temperton, 2015).

India’s development of financial system with respect to banks and markets, the size is much smaller than the LLSV- sample average level. Finally, based on the above fact we can conclude that the India’s stock market and banking domain are small relative to the other countries. An estimation of 45% of the total market capitalization of listed firms is actively traded in India, and hence a value traded in terms of GDP ratio of 0.16 is calculated. The float supply figure of 45% is based on our own calculation of free float adjustment factor of about 1,000 large firms listed on the Bombay stock exchange(small firms are less frequently traded than large firms).

The size of its economy, and the financial system is dominated by an efficient (low overhead cost) but significantly under-utilized (in terms of lending to non-state sectors) banking sector (Sinha et al., 2015).

Moreover, the situation has changed in recent years: Since the middle of 2003 through to the third quarter of 2007, Indian stock prices have appreciated rapidly. Figure 1 shows the rise of Indian equity market which made the investors to earn higher returns by investing in Bombay Stock Exchange (BSE) or BSE's SENSEX Index than from investing in the S&P 500 Index and other indices in the U.K., and Japan during the period. Only China was better in this area. The two major Indian exchanges Bombay stock Exchange (BSE) and National Stock Exchange (NSE) has been compared with other major exchanges in the world. During the last half of 2005, BSE was the sixteenth largest stock market in the world in terms of market capitalization. NSE ranked as eighteenth in the world. Trading in BSE is one of the most concentrated among the largest exchanges in the world, with the top 5% of companies (in terms of market capitalization) accounting for over 72% of all trades, but the (share) turnover velocity of BSE (35.4% for the year) is much lower than that of exchanges with similar concentration ratios. Indian markets outperformed most major global markets handsomely during 1992-2006. In 2004-05, non-governmental Indian companies raised $2.7 billion from the market through the issuance of common stocks, and $378 million by selling bonds/debentures (no preferred shares).

The financial markets in India are comparatively smaller than the size of its population and economy, irrespective of the size of new issues4. It has been evidenced through the Reserve Bank of India's Handbook of Indian Statistics that there has been a rapid growth in portfolio investments as well as foreign direct investment (in stocks and bonds) in the past 15 years. In fact, it also reports that the

size of bonds have reached twice the size of stocks. In 2005, the cumulative foreign investment flow equalled 11.58% of the GDP whereas, it was just 0.03% in 1990. Findings by Morck et al. (2000) reveal that as compared to developed nations, prices of stock are more synchronous in emerging economies. According to the authors, this occurrence is attributed to imperfect market regulation and poor protection for minority investors within emerging markets. Whereas, the frequency of stock movement is much less in India as compared to that in China (which incidentally is said to be the worst the world over), at the same time, they happen to be more synchronized as compared to those in markets that are already developed such as U.S.A. (La Porta et al., 1997).

The graph presents a large number of nations that have an English common-law origin (French civil-law origin) on the top-right region (bottom-left region). Within the graph, India has been aptly positioned in the south-eastern region and has a comparatively strong legal protection (specifically, protection that is extended by the law) however with financial markets that are smaller. The financial sector, in tandem with the rest of the economy or even slightly greater than the rest, the financial markets in India has experienced an important transformation from the time of market liberalization. Though it has not been that easy going however, the outcomes have been more or less positive. The banking sector in India has witnessed a steady growth in size (from the aspect of total deposits) over the decades, where the average annual growth rate was recorded at 18%. Out of the total 100 commercial banks that are functional today, 30 of them are owned by state, 30 happen to be private sector banks while the remaining 40 are foreign banks. The market nonetheless is dominated by banks that are owned by the state (accounting for around 80% of assets and deposits).

The post liberalization era has witnessed the rise of new private sector banks and has also seen many new foreign banks entering the market (Sinha et al., 2015).

As a result the concentration ratio in India is quite low as compared to other emerging markets (Demirgüç-Kunt & Levine, 2002). Between 1991-1992 and 2000-2001 there has been an increase in competition with the Herfindahl index (a concentration measure) for assets and advances falling more than 28% and 20% respectively (Koeva, 2003). A private bank viz., ICICI has emerged as the second6 just within a span of ten years since they came into existence. If the LLSV is taken into consideration, the horizontal axis indicates the score of the overall total of shareholder rights, creditor rights, government corruption and rule of law. Similarly, the vertical axis score reveals the score of the distance of the nation's external market (domestic firms/pop, external cap/GNP, Debt/GNP, Log GNP and IPOs/Pop to the mean of all nations. A figure that is positive (negative) reveals that the overall score of a nation is higher (lower) than the mean. As compared to Asian nations, the banking system in India has done comparatively well in managing the problem of NPL. The Indian banking system reflects a healthy status partially due to the fact that they established high standards while choosing borrowers (lack of sufficient funding and the strict standards established by banks have been severely criticized by several firms). Nonetheless, the aspect of "ever-greening" of loans has become a matter of concern in order to avoid being slotted as NPLs. Similarly, as compared to the banking sector in other Asian economies, the Indian banking sector has been lucrative in terms of profit too (Jain & Bhanumurthy, 2005).

As per the current trends, it has been noticed that nationalized banks are gradually being replaced from their preeminent position by private banks. While the State Bank of India has managed to retain its position as the largest government

owned bank in India, the retail banking sector has witnessed the emergence of private banks like HDFC bank, Axis Bank (formerly UTI bank) and ICICI that have now become major players. While each of these private banks took root with the help of financial institutions backed by the government, these private banks come across as professional enterprises driven by profit. The number of Non-Performing Assets (NPAs) within the loan portfolios of banks clearly indicates the current health of the banking industry. This is critically significant for the economic health of the nation. While foreign banks have been known to have the healthiest portfolios, nationalized are a complete contrast, however, this downward trend over the board can certainly be a positive aspect. Though there is scope for improvement, the existing ratios on the whole are not that alarming specifically in comparison with other Asian nations. Changes were not just restricted to the banking sector alone in fact, there has been a turbulence in the equity markets too. The era succeeding reforms experienced higher returns in the average stock market on the whole as opposed to the era before reforms. From the time the reforms were first implemented, the spread of 'equity culture' through the nation is at a higher degree than earlier.

The BSE market capitalization to the GDP is clearly evident through this trend. While the growth of GDP has been rapid as compared to earlier, there has been a substantially higher growth in equity from a long-term perspective10. The growth in prices of stock (and the related reduction in equity costs) was complemented by a surge in the quantum of funds raised through the issue of debentures as well as stock. This trend began from the time reforms were implemented and the same trend continued for more than five years (figure 1.14). But it hasn't been smooth sailing throughout. Post liberalization, the Indian stock market bubble has been burst at least twice in a major way. The reliability of the equity market institutions were raised

during the first such instance that coincided with the initial reforms. Another crisis hit the bourses in 1998 and in 2001 notwithstanding a joint parliamentary committee investigation and major media attention. A key role in these recurring crises was played by diverse institutional issues and rather than fixing it proactively, it was done in a reactive manner. A feature that is unfortunately quite common in India as compared to developed nations is the issue of proper monitoring of bourses and foul play. As a result, whenever there is a sudden increase in stock prices people get concerned about an imminent drop in rates. Over a period of time, institutions have not only become more transparent but they have also improved. As a matter of fact, the Indian scene is now well established with derivatives and the 'badla' system of rolling settlements that existed since time immemorial has ceased to exist (Pradhan, 2009).

Since the time of liberalization, the advent and phenomenal growth of equity derivatives have certainly proved to be a decisive change within the Indian financial realm. Though the move was met with some resistance from the part of traditional brokers within Indian exchanges, trading in options and futures in India commenced at the turn of the century. The fast paced growth in turnover within NSE derivatives market that was split up into diverse types of instruments is clearly evidenced through figure 1.15. Apparently future – in individual stocks as well as index have proved to be more in demand than options. Nonetheless, there has been a phenomenal growth on the whole in less than five years. Though interest rate futures that were tradable have also made their presence felt, but the volume of trading has been rather sporadic and negligible. Along with Interest Rate Swaps and Forward Rate Agreements, the domain of fixed-income derivatives has also experienced significant growth and is

being regularly used not only for hedging corporate risks but also for inter-bank transactions.

Indian companies have also been known to largely utilize forward contracts, currency options and currency swaps to evade currency risk. In recent times, a surge in activity has also been noticed in the Indian market for corporate control. The legal and institutional aspects of investor protection within India has been covered in the following section (Sahoo, 2013).

NBFC's accepting public deposit (NBFC's-D) and NBFC's not accepting public deposits are the types of NBFC are which are mentioned above. RBI defines operating leasing entities a leasing company since operating lease is not 'equipment leasing' business as the company does not come under RBI's definition. Equipment leasing is the only financial leasing is included in RBI's definition. The size of the asset of NBFC's is further classified. System investment and non-systematic investment NBFCs based on the size of the asset are also classified in NBC'S-ND .3/4 Systematically importance of NBFC's-ND is overviewed by Indian NBFC sector Bothra and Sayeed (2011) performance in 2010, prospects in 2011 Vinod Kothari and company legal update. Systematically important NBFC's-ND (NBFC-ND-SI) should show Rs100 crore and more in its last audited balance sheet. Minimum CRAR of10% is maintained by NBC'S-ND-SI. Lending to any single borrower/group of borrowers exceeding 15 per cent/25 per cent of its own fund; b) invest in the shares of another company/single group of companies exceeding 15 per cent /25 per cent of its owned fund and; iii) Lend and invest (loans/investments taken together) exceeding 25 per cent of its owned fund to a single party and 40 per cent of its owned fund to a single group of parties is allowed by No NBFC-ND-SI. Non systematically important NBF's-ND (NBFCND-SI) considered when the asset size does not exceed over 100

crores as per last audited balance sheet. Since the last decade, the above table shows the trend of registration of NBFC's with Reserve Bank of India.

3.5 Role of NBFC

The role of NBFC has been deemed vital in the robust growth and effective functioning in the economic development. The well-functioning financial system is necessary for thriving modern economy by a universal agreement. Financial services act as a critical pillar in contributing to macroeconomics stability and sustained economic growth in the advanced economy (Randall, 2010). The savers and investors could place choice of instruments as due to the development of the financial market. The investors could place their funds for more enhanced returns in comparison to the bank deposits due to further development of NBFC's. NBFC's are more popular among the lower and middle-class population including India due the various schemes offered (The World Bank, 2003). NBFC's development around the world is recognised especially in the aftermath of repeated emerging market crises in the countries with the bank-dominated financial system. In the developed financial market its provides access to finance for development of firms and individuals at a reasonable cost, reduced volatility and distortions by operating in an environment according to the report of (The World Bank, 2003). The participation of NBFC's has been made possible for widening financial system as a whole. The development of NBFC's thus challenged the banking sector to improve quality and efficiency and deliver at flexible timings and competitive prices (The World Bank, 2003). NBFC were hence the first to enter the un-traded market and also the first to develop the market before the banks entered this field. The NBFC's foreign loan against gold jewellery for the first time following which the national banks entered the market to offer such an asset loan (Mohan, 2014).

NBFC's first started lending money to small traders and small transport operators and financing used commercial vehicles. Many financing companies were pioneered by NBFC sector such as lease fiancé, venture capital finance, financing and transport to name a few, which made NBFC's to play a major role in business of securities that is based on lending such loan against shares, margin funding, Initial Public Offering (IPO) financing, promoter and so on. According to the report by a task force appointed by FICCI, the NBFC encourage retail participation in public sector .NBFC's has taken housing finance to newer heights. NBFC's also played an important role in wider reach of microfinance. Effectiveness as an engine for economic growth and enhancing the financial system capacity to absorb is for the development of such alternative financing vehicles adds the liquidity and diversity of the financial system. Sound and Stable financial statement and development of both sectors over both sectors offer important synergies are the key prerequisites for non-bank financial intermediaries (Jeffrey & Pomerleano, 2002).

The rapidity of non-bank financial services is more than the deposit /lending activities of the commercial bank. Accepting deposits and providing loans to non-traditional banking activities has been sought to diversify from the traditional commercial banking system. Enhanced equity and risk-based products are offered by NBFC's. The growing demand for property ownership, small-scale investment and saving for retirement and a growing need for housing fiancé, contractual savings, insurance services, and pension plans management and asset management has reached the stage of discernible economic development due to the rise of the middle class in India. As the commercial banks in India is not functioning as a full pledged universal banking because the banking system cannot meet the requirements (Reserve Bank of India, 2017). The requirements are being met opening banking financial subsidiaries

by all major banks in India. Accessing financial services enhances the competition and diversification of the financial sector is the crucial role played by NBFC's for broadening the access. The NBFC's plays the role as a catalyst in the economic growth and also provide proactive regulatory policies as well as economic development (Vadde, 2011).

3.6 An Overview of the Indian NBFC Sector

Debentures borrowing from banks and FLs, commercial paper and inter-corporate loans are the funding sources of NBFC's. Directly and indirectly, a bank is also a major source of funding for NBFC's. NBFC's makes the banking system vulnerable as it depends on the banks.

3.6.1 Funding by NBFC's

Between the savers and the investors the bank played an important role. A dramatic transformation takes place in the last few decades due to the financial intermediation. The Bank is providing credit for the people to raise fund investment through stock and bond market new financial products and instruments like mortgage and other asset-backed securities financial futures and derivative instruments like swaps and complex option. Allocation of risks and re-allocation of capital to more efficient use are provided by NBFC's to savers to investors. The ultimate lenders who have moved away from the direct participation in the financial markets to participation through a range of intermediaries are due to the increase in the breadth and depth of financial markets. NBFC's account is for 11.2% of the assets of the total financial system in the international market have been mirrored in the financial system in India. In small scale and retail sector, NBFC's has played an important financial intermediary. RBI consists of NBFC's-d and NBFC's-ND with total no of

12630 NBFC's registered with RBI. The largest share of assets and the largest share of deposits were held by the finance company amongst the NBFCs-d segment by the end of March 2010. The funds provided by NBFCs are: Commercial vehicles and cars; Gold loans; Construction equipment; Microfinance; Consumer durables and two-wheelers; Loan against shares; Funding of commercial vehicles; Funding of infrastructure assets; Retail financing; Loan against share; Funding of plant and machinery; Small and Medium Enterprises Financing; Financing of specialised equipment; Operating leases of cars, etc. types of instrument executed; Loans; Hire purchase; Financial lease; Operating lease (Bothra & Sayeed, 2011).

3.6.2 Significance of NBFC's

The monitory services sector has been found to have enormous growth in India. Commercial banks are not only introduced but non-banking monitor companies are also introduced. Monitory services like loans, chit funds are offered by non-banking financing companies. Due to their performance and growth rate growth, the NBFC's became an important player in economic development, especially in India where the population in the rural areas is 65-70%. The significance of NBFC's is easily understood by the following points.

Size of the sector: Despite slow growing speed in the economy, the NBFC's have grown well in the last few decades. The size of the economy grew 12.5% in March 2013from 2.4% in 2006. The share of the asset will go; further, the GDP would also go further only if the asset of NBFC's will be below 100 crores.

Growth*:* The banking sector was much below regarding growth rate as compared with NBFC's. 22% is the average growth rate of NBFC. NBFC's growth rate was 25.7% even when the country's growth rate slowed to 6.3% in 2011-12 from 10.5% in 2010-11 (Acharya et al., 2013).

Profitability: Every year the contribution of NBFC's is than banking sector. The banking sector is much more expensive than NBFC's which constitutes to why people prefer the NBFC's. Customers are provided cheaper rates of interest by the NBFC's. The rates of non-lending by NBFC's to customers are however much higher than the banking sectors. The credit percentage of banks 21.4% is much lower than the NBFc's24.3%. NBFC's are more popular among the customers than banking sector.

Infrastructure lending: The NBFC's contribute in the lending to the infrastructure projects for the purpose of development of the country like India. The NBFC's earns the profit over the larger period. The projects are very riskier. Due to the risk, many banks feel afraid in lending to infrastructure projects. One-third of the total assets are lent by NBFC' in the infrastructure sector as of March 2013 as compared bank lent only 7.6%.

Promotion inclusive growth: As the sector works for promoting inclusive growth, NBFC's attracts the wide variety of customers both from urban and rural areas. The company provides the fund for rural areas for the development of the countryside. Small Ticket loans are also provided for the affordable housing project. The activities of the company help to promote development growth in the country.

As indicated by the Economic survey 2010-11, it has been accounted for that NBFCs overall record for 11.2 for each cent of benefits of the aggregate money related framework. With the developing significance doled out to monetary incorporation, NBFCs have come to be viewed as essential money related middle people especially for the little scale and retail segments. In the multi-level monetary arrangement of India, significance of NBFCs in the Indian budgetary framework is highly talked about by different boards delegated by RBI in the past and RBI has been

altering its administrative and regulating approaches every now and then to keep pace with the adjustments in the framework. NBFCs have ended up being motors of development and are vital part of the Indian budgetary framework, improving rivalry and broadening in the money related area, spreading chances particularly on occasion of monetary pain and have been progressively perceived as correlative of managing an account framework at focused costs. The keeping money segment has dependably been exceedingly controlled, however streamlined approval techniques, adaptability and opportunes in meeting the credit needs and ease operations brought about the NBFCs getting an edge over banks in giving financing. Since the 90s emergency the business sector has seen touchy development, according to a Fitch Report1 the exacerbated yearly development rate of NBFCs was 40% in contrast with the CAGR of banks being 22% as it were. NBFCs have been spearheading at retail resource sponsored loaning, loaning against securities, microfinance and so forth and have been stretching out credit to retail clients in under-served regions and to unbanked clients (Bothra & Sayeed, 2011).

3.7 NBFC's and its Impact on Indian Economy

The global financial crisis brought about a swing on the aspect of liquidity finances that put NBFC's in India in quite a confusing position. While many had the means to convert their liquidities into short term assets, the crisis itself brought a focus on these NBFC's and their operational styles in various segments of the financial sector. Hence, while the global crisis did not impact India's financial system largely, the repercussions of such an event were more evident on the regulatory structures surrounding the sector. The focus also brought to fore the links between these NBFC's and the banking sector. Before the crisis occurred, the regulatory framework for NBFC's occurred in phases of evolution and each phase seemed to be

rather generous to the sector as a whole (FICCI, 2013). This can be evidenced in the aspect that all the non-banking entities were encouraged to registration of all entities with minimal capital and also benefits to the sector that were along the lines of the benefits enjoyed by banks. On the other hand, some of the regulations were marred with negative impacts on business such the restriction of funds that took place between the banks and the NBFC's and also the general consensus of the high growth that was taking place in the non-banking sector. In view of this the Thorat committee (headed by Usha thorat) and the Mor committee (Headed by Dr. Nachiket Mor) were pioneers in the evolution of the most recent regulatory frameworks that surround this industry. This was done with repeated discussion and exchanging ideas along with recommendations to policy. The resultant policy however, was found to be quite pleasant for the sector as released by the Reserve Bank of India (RBI) in the November of 2014. In light of this many organisations were of the hope that the classification of non-performing assets would remain the same. This regulation however, saw to it that the extended timelines for implementation of the regulation and the exemption from one-time reconstruction eased the process for them (FICCI, 2013).

Although it can be stated here that this shift in the policies marked quite a turning point for the industry as a whole, the guidelines also mark a change in the regulation that leaned more towards policies that are activity based. As a result of this, the NBFC sector has been able to carve itself a niche area in the largely predominant banking sector of Indian financial arena. It can therefore be stated that the NBFC's is characterised by very diverse players as well as businesses that bridge the informal and formal sectors of economy in India for the area of finance (FICCI, 2013). In this

context, the NBFC's can claim the credits that go towards for converting Indians to the use of a formal regulated system of finance.

3.8 Background Analysing the Revised Regulatory Framework for NBFCs

As a result of the above, the framework has impacted the borrower behaviour in a positive manner and also aided in the collection of credit related data thereby effectively strengthening the positioning of the finance where the data thus produced and the information can not only be effectively shared but that which can also be accessed by the policymakers along with the other market participants. The specific regulations for NBFC on the whole have been adjusted over time to suit the non-banking industry as the frameworks are largely based on the baking industry. But other pressures for the Indian regulations are to be at par with the global standards even though the non- banking industry here operates on much different standards than their global counterparts (KPMG, 2014). Therefore, the tenacity that exists between a sector that is differentiation and the tendency of the regulations that focuses on driving the standards constitutes to the main challenges of the regulation in the NBFC sector. However, what is imperative here is that the final guidelines for the sector were able to address most of these issues without actually affecting the legalities as well as reducing the effort involved for the participants (Sharma, 2014).

Market segmentation that has thus been based on consumer interface, acceptance of deposits, protection of the consumers, and liability structures not only impact the future growths of the industry but also align the market to the regulatory structures. This is evidenced in an instance where constricting the leverage of non-systematically important NBFC's also exempts them from a Capital Risk Adequacy Ratio (CRAR) and other revised NPA norms; which can further aid in the development of the business models that can balance opportunity, risk and constraint

which can eventually lead to sustainability in business (Reserve Bank of India, 2014). It has also been projected that the risk based regulatory framework may aid in neutralising 'regulatory arbitrage' as these opportunities are being tackled with set benchmarks of limited capital thereby making the threshold for systematic ventures uniform but also being applicable groups. On a similar note, NBFC's that accept deposits (NBFC-D) and Asset Finance Companies (AFCs) also get aligned to the deposit and rating requirements. Furthermore, the credit norms for the AFCs are aligned to the systematically important NBFC's. This can be construed as good move in resisting the complete formalisation of the NBFC's (Ernst & Young, 2014).

The uniqueness of the NBFC does however remain their sole advantage of being adaptive to the market demand conditions. In this regard, the formal categories that do not enjoy regulatory benefits do create a challenge. With this in mind it is imperative to discuss the dilution of the NBFC's.

3.9 Diluting the NBFC

For the purpose of diluting the NBFC, it is necessary to keep in mind the factor asset income requirement at 50%and also not restricting the captive NBFC. Other advantages of diluting include the ability of the regulators to address issues by using the activity based regulation system. In spite of such leeway, there still exists a debate on whether a Core Investment Company (CIC) can be classified as an NBFC. It is interesting to note here that with the lack of the credit concentration norms for NBFC's that accept no deposits and also that are not systematically important, group holding companies may continue to be NBFC's rather than being classified as CIC's. This is also advantageous as the leverage amount is higher in the case of NBFC than that of the CIC; this is even though they fall under the purview of different regulations (Nishith Desai Associates, 2013).

In view of this, the definition of Foreign Direct Investment (FDI) of an NBFC is not yet along the same lines as the definition put forth by RBI. This in turn causes a lot of friction between the foreign investors especially in term of the investment aspects of the sector (Nishith Desai Associates, 2013).

3.10 Evolution of the regulatory framework for NBFCs

The year 1964 saw the introduction of the regulation (section chapter IIIB of the reserve bank of India Act, 1934) meant to regulate NBFC-D. Here, there were several experts that evaluated and also supplicated suggestion as to the role that NBFC's would play in the financial. The committee members of note here were the Narasimham committee and the Working Group on Financial committees that was headed by Dr. A.C. Shah. Besides providing the inputs for the future role of NBFC's the expert panel also evaluated for their potential for growth and all the policies that may be introduced to better the sector. Thereby, many of the recommendations that were put forth by this expert panel later formed the very framework for regulation of the NBFC's as it is today (Gandhi, 2014). The emergence of the NBFC's in close relation with other financial entities within this sector in conjunction with the fact that many big NBFC's did fail; the framework was hence revamped with the introduction of prudential norms in the year 1996. Further on, the RBI delineated the deposit and non-deposit accepting NBFC's for which separate prudential norms were introduced in the year 2007. It can hence be stated here that the NBFC norms have undergone several remarkable changes over the last few years with the gaining recognition as systematically important entities in the financial sector. The connections within the sector run as deep as NBFC's being viable for risk which may very well impact all the players as well the entire sector in itself (Adukia, 2014).

In the recent past of the NBFC segment, there has been some consolidation especially in the NBFC-ND-SI segment. This can be evidenced in the fact that the number of NBFCs that are registering with the RBI has been projecting a steady decline with the overall growth in the assets for the same period of time. On the other hand, the asset growth and composition of the NBFC's asset growth have only risen over the years as is evidenced in the asset growth pattern over the last few years. This is the direct result of the NBFCs having carved niches in the segments such as automobile finance, infrastructure finance, gold and personal loans and other capital markets. Meanwhile on the other hand, segments such as the retail capital market, construction, cars, mortgage, gold loan, corporate loans witness a slowdown in the asset quality due to the overall slowdown of the economy and also due to a weak operating environment. However, there has been an increase in a more positive work environment which can be seen in the remarkable drop in the non-Performing Assets (NPA) for the year 2014.

Given the fact that the norms for asset classification have been revised in the recent framework, a rise in the NPA has been thus projected for the future.

The NBFC sector has shown considerable growth on a yearly basis in net profit in the recent past. The projected growth may be expected to continue with the governments as well as RBI's focus on the financial inclusions.

3.11 Banks and NBFCs

The share prices of the NBFC's have gone up from 10.7% in 2009 to 14.3% in 2014 for the banking assets which further add to its systemic importance. With respect to the assets, the NBFC's share for assets has been in line with the Gross Domestic

Product (GDP) at the current market price which has been on the rise as evidenced (8.4% in 2006-12.5% in 2013).

3.11.1 Funding Source of the NBFC

The rise in the advances for a bank has been seen to be the major contributor towards the funding for the NBFC. The rapid rise in the advances for banks also is slowly increasing the dependency on the NBFC sector. On the other hand, the growing dependency of the NBFC on the bank funding lays stress on the banks. It may also prove to be difficult for the NBFC's as banks can start to refuse the funding in case they have liquidity issues. In light of this, the after effects of the global financial crisis has enunciated the need to broaden the scope for these NBFC and also alter the regulatory frameworks so as to bridge gaps, widen the opportunities and also align the links and dependency of the NBFC to the rest of the financial sector. Therefore, a need arose to further harmonise the framework in order to ensure that the frameworks of NBFC meet the standard objectives of the RBI adequately. This would also ensure that the impact on the business as such were quite minimal that can be spread over time to further minimise any immediate imbalance. The Thorat committee was once again convened for this purpose, so as to identify the risks in the NBFC sector and how to further address them so as to enable for the financial sector to be robust (Gumparthi, 2010).

3.12 Journey of NBFC thus far

Principal Business Criteria (PBC) is achieved by all NBFCs NBFC-ND NBFC-D within two years with turning points that are endorsed (March 2014 - 65% and March 2015 - 75%). The RBI can be approached with a detailed plan that would enable them to achieve INR 25 crores in resources within 2 years, providing it is

relevant. Either they realize 75% principle business criteria by March 2015 or they can face the prospect of being banned from reimbursement of stores / raising stores asset order and standards of provisioning.

- To be made in a manner that is suitable for banks – Implementing stage-wise
- Provisioning for standard resources was increased from 0.25% to 0.40%. Recovery standards and liquidity necessities
- Maintaining high fluid resources; no liquidity hole in 1 – 30 day pail
- Corporate Governance of NBFC Extending the SARFAESI structure
- Getting prior RBI endorsement for - Any variation in increment or control in shareholding that is more prominent than 25% of value –
- A board of trustees for remuneration to pay officials
- Prerequisites for enhanced revelations for Tier 1 capital sufficiency and risk weights
- To be specific, NBFCs have presentation in areas that are delicate such as capital business sector, products and land to keep up Tier 1 capital at 10% Captive NBFCs – at least 12% of Tier 1 capital – For capital business sector exposures higher danger weights of 150% to be accorded and for business land exposures 125%, grouping multiple NBFCs (Sinha, 2014).
- Collection of assets for direction and enlistment. A modified characterization plan was proposed by the report presented by the Thorat Committee which corresponded with liquidity, provisioning and standards of corporate administration and stringent capital ampleness. The Mor Committee was set up in September 2013 by the RBI with an objective to outline a structured vision with regards to monetary lending and other

aspects within India. The committee was also entrusted with the task of auditing existing processes, developing new ones, arranging the configuration standards while also ensuring the development of an extensive observatory system that monitored the progress of budgetary incorporation and structuring similar processes throughout the nation. The arrangement of occasions that led to a redesign in the NBFC administrative system is presented through a graphical representation. Taking into account the recommendations presented by the Mor and Thorat Committee and on the basis of the criticism it received, in December 2012 draft rules for NBFC area open remarks were issued by the RBI. Sufficient time to implement the new administrative system was recommended by the RBI in order to avoid disruption. Taking into account the major aspect of suggestions, the changes as proposed by the draft rules encompassed passage point standards, key business criteria; liquidity prerequisites for NBFCs, corporate administration and prudential controls that included standards for provisioning and grouping resources (Agarwal, 2014).

- Merging NBFCs into two categories:
    1. Main Investment Companies, and
    2. diverse NBFCs
- Offering advantages such as; rebates in tax, points of confinement for banks or the necessity for a segment status that facilitated progress in view of expert rata resource premise, unpredictability in structure, risks in funding and credit, estimation of risk and transferring revelation to national and separate banks.

- Wholesale subsidizing imperatives being tended to systematically
- Facilitating an open system that enables speculators to participate in paying off debtors market issuances of NBFCs
- Accessibility and scope to renegotiate plans
- Prerequisites for low capitalization for NBFCs that are claimed outside
- Compulsorily accepting centre keeping money and exposure of anxiety test
- The standards for NPA acknowledgements and provisioning (taking into account standard resources) will be defined taking into account the level of every class that will be benefitted
- Divulging anxiety test and compulsorily choosing centre managing an account
- An evacuation of specific boundaries that hamper the smooth transition of NBFCs into wholesale / national banks
- Temporary rules for NBFCs Mor Committee report, keeping any fresh NBFC application in temporary cessation, Securing / exchanging control of NBFCs need to be endorsed in advance. The administrative structure was liquidated on 10 November, 2014 by the RBI that hinged on the following goals:
- Consistence can be made less demanding by streamlining and harmonizing directions
- Concentrating on directions that are action based without hindering specific areas within the segments that are not particularly dangerous to the wider monetary framework

- Tackling any imminent threats and rectifying administrative loopholes wherever it exists
- Reinforcing the revelation and administrative models

The administrative structure that has been re-evaluated in not a material for every NBFCs but it is to NBFCs who have been listed as essential merchants. The surviving directions of microfinance NBFCs and CICs may win in the event they are in conflict with overhauled controls. As per the altered administrative structure, it has been implied that it is essential for all NBFCs to accept the prudential standards that have been accepted, if possible, it can be done in a phased manner according to the course of events as endorsed. In tandem to the commitment made while liquidating the draft rules in December 2012, the RBI made it clear that all administrative changes be implemented in a phased manner in order to prevent any kind of disruption to business. For all NBFCs, the least net claimed assets were Rs. 2 crores. In accordance with the existing law, it was mandatory for NBFCs that enrolled post April 21, 1999 to have least net claimed stores (NOF) of Rs. 2 crore. Nonetheless, a large number of NBFCs that enrolled prior to that date were permitted to continue maintaining least NOF of Rs. 25 lakh. The fact is that any NBFCs that operate with a base capital that is below Rs. 2 crore are accountable to execute business exercises that are highly constrained in case there are any. Keeping in mind the fact that a higher NOF is needed for annexing innovation that is cutting edge, also it is also to ensure the right base capital for the diverse exercises that are directed by NBFCs. As of now, it has been made mandatory to maintain a base NOF of Rs. 2 crores for every NBFC irrespective of whether they have enrolled prior to or after April 21, 1999. As a matter of fact, it is essential for every NBFC to realize a base NOF level of Rs. 1 crore before the end of March 2016 and Rs. 2 crore before the period of March 2017. The

RBI is yet to issue a notice that rectifies the existing directions. Apprehensions exist in certain aspects with regards to the date from which particular controls must be implemented in the event when no specific course has been suggested. This perspective is most likely to be cleared through a warning from RBI. The extraordinary development in the NBFC division in tandem with its growth amongst linkage and reliance with other diverse organizations with monetary functions has compelled stringent directions to be presented with a view to cover the dangers. This includes RBI's control with regards to NBFCs that don't essentially present a systematic threat to the monetary market. Nonetheless, directions that are not to robust also presents the scope for disturbing elements remaining undetected which can generate unwanted results for the monetary structure. As per the existing directions, NBFCs were arranged such that they accompany three gatherings, fundamentally for regulatory reasons:

- Depositing tolerating NBFCs
- NBFCs with resources under Rs. 100 crore that are non-store tolerating
- NBFCs with resources of Rs. 100 crores or more that are non-store tolerating

With a view to establish a balance amongst over-control and under-control, the edge resource size has been expanded by the RBI for NBFCs to be perceived as critical systematically (NBFC-ND-SI) from Rs. 100 crore or more to Rs. 500 crore or more2. Other than that, a structure that has been rearranged to facilitate light touch direction was established for NBFCs that are not imperative systematically (NBFCs-ND) i.e., NBFCs with absolute resources well under Rs. 500 crore. A total of 12,029 enlisted NBFCs existed out of which store tolerating NBFCs totalled 241; this was the

figure as on March 31, 2014. Out of the NBFCs that were non-tolerating, a total of 465 NBFCs were having resources that totalled Rs. 100 crore or more, while 314 NBFCs held resources ranging from Rs. 50 crore to Rs. 100 crore while 11,009 were said to have resources under Rs. 50 crore. Considering the changed limit that was set at Rs. 500 crore, around 11,598 out of the aggregate 12,029 enlisted NBFCs were expected to be termed as NBFCs that were vital non-systematically. A major portion of the NBFC segment was expected to be secured through the streamlined structure in this manner. As of now, 275 elements that were NBFCs-ND-SI, were supposed to be termed as NBFCs-ND following which they would be accountable to controls that were less stringent. As a result, it would facilitate the capacity for transfer of data within the RBI in order to synchronize significant administrative centre onto NBFCs that had a comparatively greater resource size (Kaur & Tanghi, 2013). Till this time, recommended directions for NBFCs depended on whether it was essential systematically or something else. On the basis of their characterization, every NBFC was expected to adhere to the complete controls for instance, the Fair Practice Code, point by point prudential standards, return filings, Know Your Customer (KYC) standards and thus giving rise to an enhanced consistence problem for NBFCs that had specific business exercises. For example, under controls that existed earlier, a NBFC was only drawn in when it came to investing resources into shares and in addition was supposed to set up KYC approaches and receive the Fair Practices Code. The altered structure of administration has looked into this aspect by arranging NBFC-NDs by considering their entrance to client interface and open assets. From a detailed aspect, under the modified administrative structure, NBFC would be categorized and further sub-arranged in the following manner: Total enlisted NBFCs Non-store tolerating Deposit tolerating NBFCs-ND-SI NBFCs-ND 12,029 11,788 241

190 11,598 NBFC-D NBFC-ND-SI NBFC-ND having open asset access and client interface, while they would be able to access open subsidies, they would not be privy to client interface, though they might have client interface, they may be deprived of entry to open assets, they will not be privy to client interface or entry to open assets2 which is anticipated at Rs. 1000 crore according to the draft NBFC rules and the report by the Thorat Committee. Recommendations by the Thorat Committee implied that it was necessary to deem NBFCs that might be a part of a solitary corporate gathering3 or those that have been segregated by a common arrangement of promoters need not be considered from a stand-alone perspective for supervisory and administrative objects. Instead, they should be considered on the whole. In tandem with the proposal, the newly evaluated administrative system encompassed the whole of the aggregate resources of all NBFCs within a gathering (including NBFCs-D) to determine the supervision and classification of NBFC as NBFC-ND-SI or NBFC-ND.

If the size of the resources of all NBFCs within the gathering is more than Rs. 500 crore, then each NBFC in the gathering would require to be agreed to the regulations pertaining to a NBFC-ND-SI. Based on the directions of the re-examined system, the consolidated resources of the NBFCs in the gathering which even include store tolerating NBFCs should be accumulated to find whether the combination of such results in each NBFC of the gathering could be arranged as NBFCND or NBFC-ND-SI. The RBI system bars the companies that are enrolled as essential merchants from the acquisition of the revamped structure which is subsequent to the essential merchant's business operations which is unique in the relation to the speculation or loaning of NBFC. In any situation, there is no specific prohibition of the total NBFCs which as listed as essential merchants inside the gathering. In the same way, with the CICs putting resources into the auxiliaries of the NBFCs, the total assets present

inside the gathering could again recollect the same assets which will lead to the collection of the assets twice. Hence, it is the responsibility of the Statutory Auditors to confirm the size of all the NBFCs in a gathering with the end goal to collect the significant benefits of the NBFCs in a gathering(Gandhi, 2014). In scenarios wherein there are unique inspectors for the different NBFCs within the same gathering, the evaluator of a specific NBFC could not be in a position to repeat the size of various NBFCs in the gathering which makes way for challenges. It would be feasible for the RBI to elucidate the totalling of resources of CICs and NBFCs. Further, there is no specific time period that has been given to consistence by NBFCs-ND (inside a gathering) affected by these procurements. The organisations in the gathering are characterised by a game plan which includes more elements that are identified with each other through the following connections:

- Subsidiary – guardian [defined as far as Accounting Standard (AS) 21]
- Joint endeavour (characterized as far AS 27) • Associate (characterized as far AS 23)
- Promoter – advance as gave in the SEBI (Acquisition of Shares and Takeover) Regulations, 1997 for recorded organizations, • Related gathering (characterized as far AS 18)
- Common brand name, and
- Investment in value shares of 20% or more

There is a threat in the form of practical challenges that may emerge during the actualisation of the statutory examiner accreditation necessity. One feasible option is to acknowledge the declaration from any chartered accountant in order to confirm the sie of the NBFCs in the gathering. Based on the prudential standards of the NBFC,

‘open assets’ ias characterised as an expression to incorporate the assets that are raised through open stores, business papers and debentures between corporate stores and bank account. As an action towards liberalisation, the meaning of open assets has been amended in order to avoid the reserves raised by the issuance of instruments that could be converted into offers inside a period of not surpassing 5 years from the issue date. The controls that are recognised characterise the open assets to incorporate assets either specifically or in a roundabout manner. The phrase ‘roundabout manner’ could be instantiated with a simple example: A non-NBFC company opens finances and then collaborates them with an NBFC subsidiary as an obligation. This shows the activity called roundabout access to the open assets. It should be noted whether the following situations could be translated to open assets through circuitous access.

- The non-NBFC/CIC saturate their assets as value into the NBFC auxiliary
- The non-NBFC/CIC collaborates with its own assets in its backup NBFC auxiliary through the method for obligation or obligation instrument.

The amended administrative structure has revealed another idea known as the leverage ratio. This is the feature belonging to the restricted prudential standards and is material to all the NBFC-NDs that are accountable to the prudential standards. This NBFCs-ND should guarantee 7 times as an influence proportion wherein all the external liabilities do not surpass the assets possessed. Such a prerequisite would interact with the development of these NBFCs to their capital. In terms of influence proportion, the term 'Outside Liabilities' is not specified in the RBI roundabout where it has been furnished (Reserve Bank of India, 2011).

No definition is discerned under the current NBFC (Non-Deposit Accepting) Companies Directions, 1997. The Core Investment Companies (Reserve Bank) Directions, 2011 (CIC controls) do specify outside liabilities as the absolute liabilities that show up in the side of liabilities on the accounting report, barring ‘stores and overflow’ and ‘paid up capital’. The instruments are necessarily convertible into value offers inside a period not surpassing 10 years from the issue date which includes all types of commitments and obligation and the insurance estimation that are issued and whether these are shown in the monetary record.

Disentangled Reporting: It is deemed that NBFCs-ND which even includes speculation organizations are required to submit a yearly give back arranged; however, the points of interest are to be advised. This is an appreciable move wherein the trouble of consistence is lessened on these NBFCs and at the same time helps the controller monitor the exercises of these organisations (Shakti Sustainable Energy Foundation and CRISIL Infrastructure Advisory, 2014).

Access to open assets and client interface: Based on the altered administrative structure, as a standard, the NBFCs-ND should agree to the restrictions stated in the prudential standards if they hold admittance to open assets. Furthermore, they should consent to lead control of business in situations if they hold a client interface. Restricted prudential standards would basically integrate the prudential standards other than the credit fixation standards and standards on capital ampleness. The controls that are secured under 'Behavior of business directions' are not independently characterized. "Open Funds" encompass reserves that are raised particularly or by implication through open stores, debentures and business papers between bank account and corporate stores; however reserves that are raised by issue

of instruments mandatorily convertible into value offers inside a period not surpassing 5 years from the date of issue are rejected. The expression "Behaviour of business directions" characterised by the incorporation of Fair Practices Code, KYC, and so on yet has not been incorporated. It would be viable to open assets to decide the suitability of the prudential standards and the emphasis in this context is laid upon the elucidation of 'roundabout access' to outline the phrase and clarify the term (Gandhi, 2015).

The term 'outside liabilities' is characterized with the end aim of computing the proportion of influence. The definition that is provided by the CIC directions could be considered with a specific end aim to orchestrate both the controls. The changed regulations for NBFCs-ND 14 increased the Tier I capital for capital adequacy purposes. For the NBFCs-ND-SI, the tier I capital has been extended to around 10 per cent. The stages are accomplished by percentages wherein the capital percentage was 8.5 per cent before the end of March 2016 and 10% before the end of March 2017. The definition for open assets under the NBFC structure re-examined avoids the stores raised by issue of instruments obligatorily convertible into value offers inside a period not surpassing 5 years from the date of issue. As the structure avoids the conversion of instruments into offers with a period of no more than 5 years form the issue date, it should be comprehended whether the instruments are the major aspects of claimed reserves. In this case, the meaning of Tier I and claimed assets could be probably changed with the purview of incorporating such instruments. The credit concentration standards for NBFCs ND-SI also remain unchanged though the operations of NBFCs and AFCs remain the same. The standards for NBFCs-D and NBFCs-ND-SI have been changed to that is appropriate to banks by converting the 180-day standard to a 90-day standard. The amended standards for resource

management is evident form the procurement for these resources which is improved from 0.25% to 0.40% of the standard advantages estimation. The standards that are modified should be in consistence and accomplished in stages before the end of March 2018. Though the changes are prone to positively affect the revenue of NBFCs in an overall scale and improve the operation costs, these changes are mere modification for the purpose of bookkeeping (Kumar et al., 2015).

In addition, around 190 NBFCs (which are NBFCs-ND-SI) will be impacted by these provisions out of which many foreign owned NBFCs, in any case follow stringent norms which are based on their internal policies. Instruments that are compulsorily convertible into equity shares within a period of 5 years are exempted from the definition of public funds. In such a case, there arises a question whether such instruments could be specifically included in the owned funds. Non-Performing Assets Sub-standard Assets - as NPA for a period not exceeding Doubtful Assets - Asset has remained substandard for a period exceeding Loan assets to become NPA if overdue Lease Rental and Hire to become NPA if overdue March 2016 5 months 9 months 16 months 16 months March 2017 4 months 6 months 14 months 14 months March 2018 3 months 3 months 12 months 12 months 6 “owned fund” means paid up equity capital, preference shares which are compulsorily convertible into equity, free reserves, balance in share premium account, and capital reserves representing surplus arising out of sale proceeds of asset, excluding reserves created by revaluation of asset, as reduced by accumulated loss balance, book value of intangible assets and deferred revenue expenditure, if any.

“Tier I capital” is defined to mean owned funds which is reduced by share investment of other NBFCs and in shares, outstanding loans, debentures, and advances which includes hire purchase and lease finance that are made to and deposits

with companies and subsidiaries in the same group which exceeds an aggregate ten per cent of the owned fund. The revised Regulations for NBFCs-ND-SI strengthening the corporate governance and disclosure norms which is in line with those recommended by the Thorat Committee which is set up to study the concerns and issues in the NBFC sector and considers the need for proper corporate governance practices. The revised guidelines of RBI have stringently tightened the disclosure and corporate governance norms for NBFC-D and NBFC-ND-SI (Gandhi, 2015). The proper governance and fit for Directors Constitution of Audit Committee, Nomination Committee and Risk Management Committee Appropriate policy in accordance with prescribed guidelines Rotation of partners of audit firm every three years Information Systems Audit should be conducted at least once in 2 years in order to assess the operational risks.

The disclosure norms for authorisation/ Registration/ licence/ are obtained from various information from the financial sector such as country of operation and joint venture partnership with respect to Joint Ventures and Overseas Subsidiaries Ratings assigned by credit rating agencies and migration of ratings during the year Penalties, if any, levied by any regulators Asset liability profile, extent of financing of parent company products, NPAs and movement of NPAs, details of all off-balance sheet exposures Structured products issued, securitisation/ assignment transactions etc. The regulations that are imposed for NBFCs-D are similar to that of the NBFCs-ND-SI since the key concern of the RBI is to protect the interests of the depositors. The norms that are applicable to the NBFCs-D also apply to NBFCs-ND-SI. The Mandatory limits and ratings on the acceptance of deposits for the deposit-accepting AFCs was comparatively less strict than the deposit-accepting NBFCs.

The acceptance to public deposits was allowed for unrated AFCs also. Furthermore, also high limits for deposit acceptance and credit concentration are also enjoyed by the deposit accepting AFCs. However, the AFC regulations are now in line with those that are regulated for other deposit-accepting NBFCs. Existing unrated AFCs will be requiring an investment grade rating by March 31, 2016 in order to accept deposits. In the intervening period to March 31, 2016, only renewal of existing deposits on maturity could be performed by the unrated AFCs and no fresh deposits could be accepted till an investment grade rating is obtained. The threshold limit for deposits by deposit accepting AFCs is reduced from 4 times to 1.5 times of the net owned funds (Jain & Bhanumurthy, 2005).

3.13 Change in management and control of NBFC

The recommendations of the Thorat Committee states that the requirement to obtain prior RBI approval for management or control change could be extended to NBFC-ND which was incorporated and considered into the RBI issued draft guidelines. All these views are culminated in the issuance of the Non-Banking Financial Companies (Approval of Acquisition or Transfer of Control) Directions, 2014 8 [herein after referred to as 'Change in Control Directions'] which is a step towards ensuring that these non-banking companies are fit and properly managed. In May 2014, the RBI issued Change in Control Directions prior to issuance of the revised regulatory NBFC framework. The stringent provisions for change in management or control were evident for NBFC-D in order to acquire prior written RBI approval whereas for NBFCND only intimation with the regional office of the RBI satisfies the requirement for approval. A key parameter that is considered by the RBI when granting a Certificate of Registration (CoR) to a company for business undertaking as an NBFC company is the proposed management or general character

of the management of the NBFC which ensures that the same is not prejudicial to the public interests.

3.14 Areas Requiring Clarity

With respect to the ambiguity in the aspects of Change in Control Directions, there is an increase in the delay of timelines and operational challenges. This could only be clarified by the intervention of the RBI. In order to ensure the fit and proper character of NBFC management, RBI should ensure Change in Control Directions for both pre and post change in control. Change in management or control of NBFCs 8 DNBS (PD). C. No.376/03.10.001/2013-14 dated May 26, 2014 Prior written permission of the RBI + 30 days prior public notice Merger/amalgamation of an NBFC with another entity or vice versa that would give the Merger/amalgamation of an NBFC with another entity or vice versa which would result in acquisition/ transfer of shareholding in excess of 10% of paid up capital of the NBFC Before approaching Court/Tribunal seeking an order for mergers/amalgamations with other companies or NBFCs Takeover or acquisition of control of an NBFC, whether by acquisition of shares or otherwise If "Control" is considered as the operative word of the Change in Control Directions. The Change in Control Directions will cover cases where such changes in the control are based on the prescribed definitions of the SEBI (Substantial Acquisition of Shares and Takeovers), Regulations 2011 (SEBI Takeover Code). If the operative word is said to be control, then the pre-requirement for the triggering of RBI approval tends to be acquisition / transfer of control. In the same context, the transfer or acquisition of shareholding without a corresponding transfer of control does not require the approval from RBI.

Following are the transactions that do not require approval from RBI at the time of initial acquisition as there is no amendment in management or control:

- Acquisition of convertible instruments (e.g. compulsorily convertible preference share)
- Acquisition of equity shares without a corresponding acquisition / transfer of control; and

The emphasis of Change in Control Directions (Control Vs. Shareholding) with respect to the application of framework in situations that are covered by the RBI remains unchanged which reveals the state of unclearness whether the Change in Control Directions could be applicable to cases where there is no change in the control at an overall group level or there is a change but control remains existing among the shareholders of the NBFC. Approval in this scenario priot would impact the timelines on transactions which could be stated as follows:

- Internal group restructurings where the control stays within the group; or
- Transfer of shareholding by existing shareholders of the NBFC

In situations where the control is within the same group then the RBI would have already considered a detailed due diligence and the group would comply with the 'fit and proper' criteria; and there will be effective change in the management or control of the NBFC. In transactions where the control ultimately remains status quo should be excluded from the needs of acquiring the approval prior from the RBI as per the Change in Control Directions. This type of exclusion would provide the necessary relief for the structuring or restructuring transactions. A 10 % of threshold for change in control – constitution and limit for paid up capital constitutes a change in management or control through amalgamations or mergers. There is no prescribed threshold for transactions other than mergers/ amalgamations. The paid up capital of

an NBFC could include the securities and instruments that are void of voting rights and will not result in any effective change in NBFC control.

In this context, the paid up capital which is considered as the ground on which the threshold should be computed leads to absurd results. This is explained with an illustration below:

- The equity share capital (10,000 shares of INR 10 each) is Rs.1, 00,000 and the redeemable preference share is Rs.9, 00,000.
- The total paid up capital is Rs.10, 00,000. The threshold in this illustration will be 100,000 (10% of 1,000,000). If 50% of the equity shares (voting shares) are transferred by the promoters of the company to a third party, this would reach 50,000 which would still be within the threshold limit of 10% of the paid up capital i.e. 100,000 and hence no RBI approval would be required.

This is not the intention to be covered by the RBI under the Change in Control Directions. Also the prescribed limit currently is 10 per cent under the Change in Control Directions which is very low and affects the completion and execution timelines of a large number of transactions. This is a consequence of the mandatory requirement to seek prior RBI approval. For example, (i) inter-group restructuring, ii) strategic investments by investors in NBFCs in excess of the prescribed threshold of 10% equity stake (without any change in control); (iii) acquisition/ transfer of shareholding of listed NBFCs on the floor of the stock exchange. The threshold limit could be amended to a higher percentage of the paid up equity capital in order to provide improved flexibility of operations to the NBFCs. According to the draft RBI guidelines issued pursuant recommended by the Thorat Committee, a threshold limit of 25 per cent could be considered. Hence, the expansion of the procedures pertaining

to corporate governance compliance to NBFC-ND is the step in the correct direction as this ensures the fit and proper management of NBFCs building a character and aids in developing confidence with investor/ customer. However, there should be an improvement in the clarity in the regulations of RBI for the effective compliance and implementation of such changes. In addition, necessary guidance is still lacking hence details of the application process, application format, supporting documentation required, and so on should be prescribed to fresh applications of NBFC in order to ensure transparency and simplicity in the process. This results in the awareness both amongst the applicants and the RBI officials reviewing the application, thereby ensuring the disposal of applications (Government of India, 2012).

3.15 Areas Requiring Enhancement

Certain committee reports have recommended changes in certain areas of financial operations. These reports are recommended on behalf of the NBFC sector which requires consideration and deliberation for the benefit of these companies. Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 (SARFAESI Act) does not cover NBFCs and the sector is kept outside the purview of the Act. The sector is requesting for benefit extension of the SARFAESI Act which is still an overdue. Though it is evident that public financial institutions such as banks enjoy the benefits of SARFAESI Act, the purview of the act is outside for NBFCs. Both the Mor and the Thorat committee identified the same and had recommended that NBFC companies should also enjoy the benefits of the SARFAESI Act. Many trade associations along with the NBFCs have represented the recommendations to be implemented on the provisions of the SARFAESI Act to registered NBFCs. It is critical to have such reforms based on the SARFAESI Act as the Act enables financial institutions to recover NPAs without the intervention of the

court (Pandit, 2011). It would be a long journey for the RBI to implement such amendments under the SARFAESI Act in order to create a level playing field for both banks and NBFCs. The role of NBFCs in the economy is diverse wherein these companies complement banks and broaden the access to finance based resources. This implies the importance of the NBFCs and the need for the sector to be brought under the ambit of the SARFAESI Act is emphasised.

3.16 Differential Risk Weights for Capital Adequacy Ratio

Risk weight assessment for capital adequacy requirements by banks takes into account the borrowers' credit rating. Though both banks and NBFCs operate in the same macroeconomic environment, the applicability of such provision is lacking in NBFCs. Even in cases of secure investment or lending where the quality of security is the same as that of banks, there exists no differentiation in the risks weights for NBFCs. In addition, the proposed draft guidelines of the NBFC exposed high risk weights for commercial real estate and capital market sector. The NBFC sector for a very long time is requiring amendments in risk weight allocation and introduction of similar norms such that of the banks. Though differential risk weights are not introduced, the revised regulatory framework has amended the considerations for regulatory foreign investment tax.

- Extension of SARFAESI coverage
- Differential risk weights for capital adequacy ratio
- Access to refinancing schemes
- Simplification and clarity in CIC regulations Foreign Investment
- Challenges in undertaking investment by way of treasury functions by foreign owned NBFCs Tax.

- 10 percent extension of tax benefits is available to banks to NBFCs capital requirement for the purpose of computing the CRAR which further increases the cost of operations for the NBFCs.

Access to Refinancing Schemes:

There is no eligibility for NBFCs in their access to schemes of refinance from National Bank for Agriculture and Rural Development (NABARD), National Housing Bank (NHB), Small Industries Development Bank of India (SIDBI) etc. This is reasoned by the fact that refinancing schemes of these institutions are available to only certain kinds of institutions. This is instantiated by the fact that the eligibility for refinancing facilities is limited by the norms of the NHB; however customers who do not have access to such facilities can be aided with the help of an NBFC. This is a violation of the neutrality norms for NBFCs. The recommendations of the Mor Committee states that the use of refinancing from NABARD, NHB, SIDBI and credit guarantee facilities should be based on the type or nature of the activity and not the type of institution. This concept is not under the direct purview of the RBI as this requires amendments to be made to the other acts based on which these financial institutions operate. However, with the increase in the increasing funding constraints of NBFCs, it is important for the government and the RBI to take measures with regard to the violation of norms. Surplus fund deployment should be construed as financing and the activity of treasury management should be made permissible under the automatic route. Similar to the heading ‘stock broking’ which is the equivalent term for stock broking business, the term ‘Non-banking financing’ should replace ‘leasing and finance’ as it would permit foreign owned NBFCs to undertake the activities that are permitted under the regulations of the RBI and at the same time

subject to the norms of the FDI.such as sectorial caps, capitalisation, pricing guidelines, etc.

Lack of Clearness in Regulations:

Since the inception of the NBFC sector, the companies belonging to this sector suffer from the lack of clearness in the regulations and hence the regulatory frameworks are not completely supportive. Another important issue with regard to the complication is the definition that is specified for CIC. The existing conditions for an entity to be designated as a CIC are based on the constraints that it could be difficult for the particular entity to undertake business from another entity. However, there are several companies which are group holding. These companies not only are shareholders of the group companies but also undertake business operations in the same entity. With the purview of carrying out business activities in the entity in a smooth way, the framework for CIC should be simplified so that these entities can come forward, register with RBI and also carry business operations with other entities in simple ways satisfying the definitions of the RBI. The challenges in the undertaking of investments through the treasury functions by NBFCs owned by foreign concerns as per the extant FDI policies are that these companies are permitted to undergo foreign investment under the prescribed route based on the 18 non-banking financial service activities. If these companies require undertaking of business operations other than the non-banking financial service activities should acquire approval from the government. This is facilitated through the Foreign Investment Promotion Board.

The norms of the RBI are based on the investing and lending activities permitted only to be performed by registered NBFCs. With respect to the management of liquidity and liabilities, NBFCs also undertake treasury based

investments. The extant FDI norms state that only ‘Leasing and finance’ based NBFCs get covered under the automatic route. Besides, the term finance is not properly defined in the norms of the RBI. Hence considering the basic meaning of the term reveals that ‘lending could be covered’ but ‘investment’ activity (both strategic as well as treasury) would not get covered specifically. Since the same act licenses both domestic and foreign owned NBFC companies, the regulations of the RBI state that both are assumed to have the same kind of ability to undertake business. The ambiguity prevailing in identifying the exact meaning for the phrase leasing and finance’ has been a challenge in mapping the RBI regulations with respect to the ‘Leasing and finance’ NBFCs (Government of India, 2012).

It is interesting to note that though there is no restriction for Indian non-NBFCS from investing in such financial instruments, the NBFCS in India with FDI are restricted from such investments which is the cause of lack of proper definitions for the policies with regard to FDI under the regulations for NFBCs. It is hence deemed essential that at least clarified that the Extension of tax benefits to NBFCs similar to that available to commercial banks which the RBI is striving to make both NBFCs and banks have aligned regulatory framework. Such alignment of regulations is recommended by the Thorat committee to have an arbitrage between NBFCs and banks. Based on the recommendations by the Thorat committee, the revised regulatory framework elucidates that the norms of classification and requirements for provisioning are modified for NBFCs to bring these regulations in line with the regulations of the banks. Furthermore, the committee had also recommended for tax-parity between NBFCs and banks. It is notable that the provisions stated in the Income-tax Act, 1961 (I.T. Act) provide tax relief to financial institutions such as banks; however, such relief are not covered for NBFCs under these provisions.

- Section 43D of the I.T. Act identifies the principle of taxing of income on receipt basis for NPA holders

According to the regulations issued by the Reserve Bank of India, in line with the other financial institutions NBFCs also follow the norms and are required to accept income with respect to non-performing accounts. If such a norm of the RBI is not covered for NBFCs, the existing tax framework will recognise such income in the non-performing accounts on a regular basis leading to the levying of tax on the income which will not be realised hence leading to severe forms of liquidity in these NBFCs in the form of cash flow pay outs. In addition, factors such as profitability and operations costs could also be affected.

- Section (1) (vii a) of the I.T. Act states that the provisions for the bad debts made by the banks, to permissible limits are tax deductible. In other means, such financial institutions are provided an option to claim such deduction with respect to the provisions made for assets that are marked as loss or doubtful assets. With regard to the recognition of income and provisioning norms, the regulations stated by the RBI for NBFCs are similar to that of the commercial banks. Based on the regulations, it is mandatory that NBFCs should necessarily make provisions for NPAs. It is hence deemed to be appropriate that the fairness of the provision for NPAs be allowed as a tax deduction procedure for NBFCs that are registered with the RBI.
- Section 194A of the I.T. Act elucidates that 10 percentage of TDS should be deducted as an interest of the instalments that are paid to NBFCs; however such deduction is exempted for banking and public finance institutions and are void of such withholding of tax. This leads to the

severe cash flow constraints as the operation of NBFCs is based on a very thin margin of interest. Sometimes, the interest rates are even lesser than the TDS.

- Section 72A of the I.T. Act states that at the time of amalgamation of banking companies, the accumulated losses could be carried forward and could be claimed by the amalgamated entity (Government of India, 2012).

However, such benefits are not available in specific to the NBFCs which are lapsing of the losses accumulated upon amalgamation. The uniqueness in the applicability of different tax provisions places NBFCs in a position that is most disadvantageous vis-à-vis other financial institutions such as banks. Hence, it is deemed that the benefits in the form of tax to banks should also be applicable to NBFCs. Tax benefit extension would provide adequate relief to NBFCs which is severely restricted to these institutions due to high funding of costs and tight profit margins. Differentiated licensing of various types of banks will create great vitality in the small scale finance sector which benefits the customers through wide number of products and services and increased penetration; hence, there is an opportunity for these NBFCs to grow. With respect to the funding constraints, the conversion to small or universal banks will be another viable option for the scaling up of NBFCs, their operations and expansion in terms of customer base and access to market. However, such conversion is not feasible for large scale NBFCs since this type of migration without regulatory forbearance could be difficult. Though differential licensing has termed to be an accepted procedure, these NBFCs will be focussing on organisations with attractive business models such that organisations can tap into funding sources. Henceforth, in a growing economy like India, only an implementation of a stable

regulatory environment will provide NBFCs the opportunities to grow in the financial ecosystem and create opportunities

CHAPTER – IV

RESEARCH METHODOLOGY

4.1 Sample Selection and Sample Size

This study is conducted to assess the financial performance of NBFC's in India. The study is an econometric one that considers the samples of various types of NBFC's. The main categorisations of the NBFC's are Loan Companies, Investment companies, Infrastructure finance companies, and Asset finance companies. Here, 50 NBFC's were chosen in total with 10 companies in each category. For the section of asset finance, it was further divided into subdivisions such as hire purchase and equipment leasing companies. Given in the table below is the list of companies that were chosen for the purpose of this study.

Table 4.1.1: Categories of NBFC's

Categories	**NBFC companies**
Loan Companies	Bajaj Holdings
	Coral India Finance and Housing
	LIC Housing Finance
	Dewan housing
	GIC housing finance
	IFCI Limited
	India Infoline (IIFL)
	India Home Loans
	M&M Financials
	GRUH Finance
Investment companies	Blue chip investments
	Fortis Healthcare Holdings Pvt. Ltd.
	RELIGARE ENTERPRISES LIMITED
	TCI Finance
	GSB finance
	Mukesh Babu Financial Services

Categories	NBFC companies
	JM FINANCIAL LIMITED
	Shree Global
	Reliance Capital
	Power Finance Corporation Ltd
Infrastructure finance companies	Rural Electricity Corp.
	Shristi infrastructure development corporation limited
	Marg projects and infrastructure limited
	GMR infrastructure
	Crest ventures
	Tourism Finance Corp of India
	GVK Power and infrastructure
	Power Finance corporation
	Centrum finance
	Nalin Lease finance
Asset finance companies	Ceejay Finance Ltd
	Ashirwad Capital
	Escorts finance
	Shriram transport finance company limited
	Cholamandalam investment and finance company limited
	Lkp finance
	Sakthi finance limited
	Kailash auto finance ltd
Hire-purchase companies	Manapuram Asset finance Limited
	VLS finance Ltd
Equipment leasing companies	SUNDARAM FINANCE LIMITED
	Magma Fincorp Ltd
	Swastika Investsmart
	Upasana finance
	Pioneer investcorp
	Choice Financial services
	Glance finance ltd

Categories	NBFC companies
	Golden Goenka
	Capri global
	Indus finance Ltd

4.2 Period of study

Obtaining the datasets for the purpose of the study involved a comprehensive search of the databases of IBA, website of RBI and SEBI bulletins, data bank of CMIE, reports and statistical data and tables published on NBFC's in different journals. The study proposes to use the (balance sheet) data for 15 years from the year 2001 to 2015. This period was chosen to represent the upward trend of NBFC's which occurred most in this period of time. This disaggregate study thus takes place at a company level, with the selection of the companies being done based on the availability of relevant data. All the companies chosen above are listed in the RBI's list of NBFC's in India.

4.3 Variables of the Study

The following variables have been used for analysing the data in the present study. **Independent Variables:**

- Operating profit margin
- Net profit ratio
- Current ratio
- Debt equity ratio
- Fixed asset turnover ratio
- Asset turnover ratio

Dependent Variables:

- Return on assets

Further to this the statistical methods used for the purpose of this study is discussed.

4.4Statistical Analysis

For the data analysis the study mainly employs the use of regression analysis, data envelopment analysis (DEA), multidimensional scaling and time series analysis.

4.5 Regression Analysis

Regression analysis is used in the context of the present study in order to identify the factors that account for the failure and success of the NBFC's with regard to their viability, profitability, granting loans and advances, recovery of loans with the amount of NPA. In regression analysis, the relationship between the independent variables (Operating profit margin, Net profit ratio, Current ratio, Debt equity ratio,

Fixed asset turnover ratio, Asset turnover ratio) and dependent variable (Return on assets) is examined. This is important as the objectives of the present research necessitate identification of the relationship between the dependent and independent variables. Regression analysis uses range from the most general problems to the most specific in each instance leading relating to a factor (or factors) to a specific outcome. In statistics, regression analysis includes any technique for modelling and analysing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables. More specifically, regression analysis helps one understand how the typical value of the dependent variable is changes when any of the independent variables are held fixed. Less commonly, the focus is on a quantile or other location parameter of the conditional distribution of the dependent variable. In all cases, the estimation target is a function of the independent variables called the regression function. In the regression analysis, it is also of interest to characterise the variation of the dependent

variable around the regression function. In regression analysis, it is also of interest to characterise the variation of the dependent variable around the regression function, which can be described by a probability distribution.

4.6 Data Envelopment Analysis (DEA)

DEA is a linear technique and non-parametric method to measure the performance of organisational unit like bank and NBFC's. DEA identifies three types of efficiencies such as the technical, cost, and allocative efficiencies. It is deemed that the performance of an organisation unit needs to be measured as the present research intentionally aims at examining the financial performance of NBFCs. For the present study, the technical efficiency is of the most value that is defined as the ability to reduce variable inputs to produce same level of output.

CHAPTER - V
EMPIRICAL RESULTS

5.1 Introduction

In this chapter the results of the analyses are presented and discussed. The NBFC has five classifications namely, loan company, investment company, infrastructure finance company, equipment leasing company and hire-purchase company. 10 companies were selected from each classification of NBFC. Totally, 50 NBFCs were analysed. RBI website, CMIE data bank and annual reports of NBFCs were used to gather financial data of the 50 NBFCs for the year 2001-2015. The following statistical analyses were carried out in the chapter namely Kolmogorov-Smirnov test, descriptive statistics, correlation, regression, data envelopment analysis and forecasting.

5.2 Descriptive Statistics

Descriptive statistics gives the summary of the data and is the representation of entire data. The descriptive statistics provides the information of minimum, maximum and the average value of study parameters.

Table 5.2.2.1: Descriptive statistics of financial ratios of NBFC

	Minimum	**Maximum**	**Mean**	**SD**
Net profit ratio (NPR)	-173.50	52.08	.54	7.69
Current Ratio (CR)	.00	1211.00	19.02	103.46
Operating profit ratio (OPR)	-19000.00	2700.00	-6.96	834.57
Debt-Equity ratio (DER)	-6518647.00	7898333.99	-4694.95	767077.25
Fixed asset turnover ratio (FATR)	-2.35	7778.00	153.36	726.58
Asset turnover ratio (ATR)	-1.68	59.03	.59	3.19
Return on Assets (ROA)	-12.00	7.72	.11	.62

Source: Calculated by Author

Descriptive statistical measures such as minimum, maximum, mean and standard deviation of financial parameters of NBFC are depicted in table 3. From the analysis, it is observed that the average value of all 50 NBFC companies' net profit ratio was 0.54 followed by, current ratio was 19.02, fixed asset turnover ratio was 153.4, asset turnover ratio was 0.59 and return on assets was 0.11. On the basis of the current ratio, the performance of the NBFC was good. However, operating profit ratio and debt-equity ratio were negative. It reveals that NBFC companies did not gain the operating profit during 2001-2015.

5.3 Correlation and Regression Analysis

Correlation and regression analysis generally provide the association information between the study parameters (variables). Specifically, linear relationship between two variables can be ascertained through correlation analysis while regression analysis gives the cause and effect relationship between the variables.

Null hypothesis: H0 - There is no significant relationship between NPR, OPM CR, DER, FATR, ATR and ROA of loan companies:

Table 5.3.1. 1: Correlation analysis of financial ratios of loan companies

		NPR	CR	OPR	DER	FATR	ATR	ROA
NPR	r-value	1	.017	.961**	-.018	-.060	-.099	.426**
	p-value		.841	.000	.870	.499	.230	.000
CR	r-value		1	.031	.002	.102	-.085	-.110
	p-value			.709	.983	.256	.312	.189
OPR	r-value			1	-.018	-.061	-.098	.422**
	p-value				.875	.489	.234	.000
DER	r-value				1	.026	.062	.050
	p-value					.828	.583	.659
FATR	r-value					1	.490**	.247**
	p-value						.000	.004
ATR	r-value						1	.704**
	p-value							.000

ROA	r-value							1
	p-value							

Source: Calculated by Author

Where NPR - Net profit ratio, OPR - Operating profit ratio, CR - Current Ratio, DER – Debt equity ratio, FATR – Fixed asset turnover ratio, ATR – Asset turnover ratio and ROA – Return on assets.

Table above provides the correlation analysis of financial parameters of loan companies of Indian NBFC. The profitability ratios such as net profit ratio and operating profit ratio were a positive relation with one another. Also, the profitability ratios were a positive relation with return on assets ($P<0.01$). It could be concluded that profitability ratios increase in value, it leads to enhance the return on assets. Likewise, the fixed asset turnover ratio was a positive relation with asset turnover ratio ($p<0.01$) and return on assets ($p<0.01$). Further, asset turnover ratio was a strong positive correlation with return on assets ($p<0.01$). However, liquidity ratio and solvency ratio did not correlate with any profitability and efficiency ratio.

Hence the alternative hypothesis "*There is a significant relationship between NPR, OPM CR, DER, FATR, ATR and ROA of loan companies*" is partially accepted

Null hypothesis: H0 - There is no significant impact of NPR, OPM CR, DER, FATR, ATR on ROA for loan companies:

Table 5.3.1. 2: Influence of profitability, liquidity, solvency and efficiency ratios on financial performance of loan companies

Independent variables	**Unstandardized Coefficients**		**t-value**	**p-value**	**Collinearity statistics**	
	Beta (β)	**S.E**			**Tolerance**	**VIF**
(Constant)	.007	.018	.373	.710		
Net profit ratio (NPR)	.108	.085	1.271	.208	.028	36.013
Operating profit ratio (OPR)	.000	.001	-.379	.706	.029	34.883

Current Ratio (CR)	.000	.000	-.242	.810	.941	1.062
Debt-Equity ratio (DER)	.000	.000	.333	.740	.994	1.006
Fixed asset turnover ratio (FATO)	.000	.000	-2.458	**.017***	.852	1.173
Asset turnover ratio (ATR)	.256	.021	11.926	**.000****	.629	1.590

Source: Calculated by Author. Adjusted R-square: 0.684; *p<0.05, **p<0.01. Dependent Variable: Return on Assets (ROA)

The effect of profitability, liquidity, solvency and efficiency ratios on the financial performance of loan companies is shown in table 5. In the analysis, the financial performance of the companies is computed on the basis of return on assets. The coefficient of determination (Adjusted R-square = 0.684) connoted that around 68 per cent of change in the financial performance of loan companies depended on the independent variables such as profitability, liquidity, solvency and efficiency ratios. The significance values ($p<0.05$) indicated that efficiency ratios such as fixed asset turnover ratio and asset turnover ratio did the significant influence on the performance of loan companies of Indian NBFC while the profitability ratios, liquidity ratio and solvency ratio ($p>0.05$) did not a significant influence on the financial performance.

The regression model for the loan companies of NBFC can be written in the following manner:

$$ROA= 0.007 + 0.108 (NPR) +0.256 (ATR)$$

Hence, the null hypothesis is accepted. However, some variables such as Fixed asset turnover ratio and Fixed asset turnover ratio are found to impact Return on Asserts.

Null hypothesis: H0 - There is no significant relationship between NPR, OPM CR, DER, FATR, ATR and ROA of investment companies of NBFCs

Table 5.3.1. 3.: Correlation analysis of financial ratios of investment companies of NBFC

		NPR	CR	OPR	DER	FATR	ATR	ROA
NPR	r-value	1	-.018	-.293**	.036	-.046	-.040	.343**
	p-value		.837	.001	.767	.626	.644	.000
CR	r-value		1	.044	.037	.018	-.035	-.033
	p-value			.616	.759	.846	.683	.700
OPR	r-value			1	-.024	-.106	-.024	.018
	p-value				.845	.262	.779	.834
DER	r-value				1	.027	.028	.018
	p-value					.840	.814	.878
FATR	r-value					1	.092	-.074
	p-value						.332	.434
ATR	r-value						1	-.122
	p-value							.150
ROA	r-value							1
	p-value							

Source: Calculated by Author. NPR - Net profit ratio, OPR - Operating profit ratio, CR - Current Ratio, DER – Debt equity ratio, FATR – Fixed asset turnover ratio, ATR – Asset turnover ratio and ROA – Return on assets.

A Linear relationship between the financial parameters of investment companies of Indian NBFC is depicted in table above. The statistical significance values ($p<0.01$) interpreted that net profit ratio was correlated with operating profit ratio and return on assets. Further, the Pearson correlation coefficient (r-value) indicated that net profit ratio was a weak positive relation with return on assets ($r=0.343$) while it was a negative relation with operating profit ratio. But, the liquidity and solvency ratios of investment companies failed to reveal the significant relationship with the other financial ratios. Hence, the null hypothesis is accepted as significant relationship exists only between NPR and OPR, and NPR and ROA.

Null hypothesis: H0 - There is no significant impact of NPR, OPM CR, DER, FATR, and ATR on ROA for investment companies of NBFCs:

Table 5.3.1. 4: Influence of profitability, liquidity, solvency and efficiency on financial performance of investment companies

Independent variables	Unstandardized Coefficients		t-value	p-value	Collinearity statistics	
	Beta (β)	S.E			Tolerance	VIF
(Constant)	.062	.021	2.925	.005		
Net profit ratio (NPR)	.019	.002	8.102	**.000****	.963	1.038
Operating profit ratio (OPR)	.000	.000	1.666	.102	.932	1.073
Current Ratio (CR)	.000	.001	-.522	.604	.983	1.017
Debt-Equity ratio (DER)	.000	.000	-.011	.992	.991	1.010
Fixed asset turnover ratio (FATR)	.000	.000	-.294	.770	.983	1.017
Asset turnover ratio (ATR)	.001	.004	.183	.856	.976	1.024

Source: Calculated by Author .Adjusted R-square: 0.553; **p<0.01. Dependent Variable: Return on Assets.

Table 5.4.1.4 shows the regression analysis for the independent variables namely, profitability, liquidity, solvency and efficiency ratios of investment companies while the dependent variable is a return on assets. In the regression analysis, financial performance (ROA) of investment companies of NBFC was 55 per cent depend on their profitability, liquidity, solvency and efficiency ratios. Among the ratios, net profit ratio made the significant impact on the financial performance of investment companies while the other ratios like operating profit ratio, current ratio, debt-equity ratio, fixed asset turnover ratio and asset turnover ratio did not a significant influence. In addition, the variation inflation factor (VIF) of all independent variables was around 1. It could be inferred that there was no multi-collinearity problem within the independent variables. Therefore, the regression coefficients possessed the less variance. It could increase the precision of the results.

Financial performance of investment companies of NBFC can be denoted as the following manner:

$$ROA = 0.062 + 0.019 (NPR) + 0.001 (ATR)$$

Only NPR tends to impact ROA. Hence the null hypothesis is accepted.

Null hypothesis: H0 - There is no significant relationship between NPR, OPM CR, DER, FATR, ATR and ROA of Infrastructure finance companies of NBFC:

Table 5.3.1. 5: Correlation analysis of financial ratios of Infrastructure finance companies of NBFC

		NPR	CR	OPR	DER	FATR	ATR	ROA
NPR	r-value	1	.009	.969**	.012	.050	.024	.367**
	p-value		.912	.000	.918	.600	.781	.000
CR	r-value		1	.017	-.005	-.089	.018	.002
	p-value			.837	.966	.343	.834	.982
OPR	r-value			1	.015	.045	.042	.343**
	p-value				.895	.637	.622	.000
DER	r-value				1	-.065	-.013	-.010
	p-value					.625	.911	.934
FATR	r-value					1	.112	.016
	p-value						.230	.867
ATR	r-value						1	.782**
	p-value							.000
ROA	r-value							1
	p-value							

Source: Calculated by Author. NPR - Net profit ratio, OPR - Operating profit ratio, CR - Current Ratio, DER – Debt equity ratio, FATR – Fixed asset turnover ratio, ATR – Asset turnover ratio and ROA – Return on assets.

Table 5.4.1.5 provides the correlation analysis of financial ratios of infrastructure finance companies of NBFC. The findings revealed that net profit ratio was correlated with operation profit ratio and return on assets based on the 1 per cent level of significance. Additionally, the Pearson correlation coefficient indicated that net profit ratio was a strong positive correlation with operation profit ratio while it was a weak positive correlation with return on assets. Similarly, operation profit ratio and asset turnover ratio were a positive correlation with return on assets of

infrastructure finance companies. Hence the alternative hypothesis, 'There is a significant relationship between NPR, OPM CR, DER, FATR, ATR and ROA of Infrastructure finance companies of NBFC' is partially accepted.

Null hypothesis: H0 - There is no significant impact of NPR, OPM CR, DER, FATR, and ATR on ROA for infrastructure finance NBFCs.

Table 5.3.1. 6: Influence of profitability, liquidity, solvency and efficiency on financial performance of infrastructure finance companies

Independent variables	**Unstandardized Coefficients**		**t-value**	**p-value**	**Collinearity statistics**	
	Beta (β)	**S.E**			**Tolerance**	**VIF**
(Constant)	.028	.040	.689	.494		
Net profit ratio (NPR)	.048	.021	2.301	**.026***	.366	2.735
Operating profit ratio (OPR)	.000	.000	-.992	.326	.366	2.732
Current Ratio (CR)	.000	.000	-.165	.870	.988	1.013
Debt-Equity ratio (DER)	.000	.000	-.083	.934	.991	1.009
Fixed asset turnover ratio (FATR)	-.001	.000	-2.196	**.033***	.945	1.058
Asset turnover ratio (ATR)	.409	.041	9.966	**.000****	.948	1.055

Source: Calculated by Author. Adjusted R-square: 0.642; *p<0.05, **p<0.01. Dependent Variable: Return on Assets

Table 5.4.1.6 provides the effect of profitability, liquidity, solvency and efficiency ratios on the financial performance of infrastructure finance companies of Indian NBFC. The coefficient of determination (Adjusted R-square = 0.684) specified that 64 per cent of the variation in the financial performance of infrastructure finance companies depended on the following independent variables namely, profitability, liquidity, solvency and efficiency ratios. Based on the significance values, net profit ratio and efficiency ratios such as fixed asset turnover ratio and asset turnover ratio

did the significant impact on the performance of infrastructure finance companies of Indian NBFC while liquidity and solvency ratios ($p>0.05$) did not a significant influence on the financial performance (ROA). In the regression model, the multi-collinearity problem occurred in acceptable level (VIF<5).

Financial performance (ROA) as a function of independent variables can be written as,

$$ROA = 0.028 + 0.048\ (NPR) - 0.001\ (FATR) + 0.409\ (ATR)$$

As three variables (NPR, FATR, and ATR) has significant impact on ROA, the alternative hypothesis, '*There is a significant impact of NPR, OPM CR, DER, FATR, ATR on ROA for infrastructure finance NBFCs'* is accepted.

Null hypothesis: H0 - There is no significant relationship between NPR, OPM CR, DER, FATR, ATR and ROA of equipment leasing companies of NBFC:

Table 5.3.1. 7: Correlation analysis of financial ratios of equipment leasing companies of NBFC

		NPR	**CR**	**OPR**	**DER**	**FATR**	**ATR**	**ROA**
NPR	r-value	1	-.007	.660**	-.076	-.082	-.079	.450**
	p-value		.937	.000	.465	.374	.355	.000
CR	r-value		1	.015	.005	-.056	.089	-.027
	p-value			.859	.964	.541	.294	.751
OPR	r-value			1	-.093	-.023	-.014	.514**
	p-value				.371	.807	.865	.000
DER	r-value				1	.056	.045	.022
	p-value					.620	.667	.834
FATR	r-value					1	.152	.078
	p-value						.097	.396
ATR	r-value						1	.412**
	p-value							.000
ROA	r-value							1
	p-value							

Source: Calculated by Author. NPR - Net profit ratio, OPR - Operating profit ratio, CR - Current Ratio, DER – Debt equity ratio, FATR – Fixed asset turnover ratio, ATR – Asset turnover ratio and ROA – Return on assets.

Correlation analysis of financial ratios of equipment leasing companies of Indian NBFC is provided in table above. From the statistical significance values ($p<0.01$), it is observed that there was some relation between net profit ratio and operating profit ratio. Also, the Pearson correlation coefficient (r-value) interpreted that net profit ratio was a positive relation with operating profit ratio (r=0.660). Analogously, net profit ratio was a positive correlation with return on assets (r=0.450). Return on assets did the positive relation with operating profit ratio (r=0.514) and asset turnover ratio (r=0.412). However, current ratio, debt-equity ratio and fixed asset turnover ratio of equipment leasing companies did not relation with any other financial ratios. Hence the null hypothesis is accepted.

Null hypothesis: H0 - There is no significant impact of NPR, OPM CR, DER, FATR, and ATR on ROA for equipment leasing companies of NBFC:

Table 5.3.1. 8: Influence of profitability, liquidity, solvency and efficiency on financial performance of equipment leasing companies

Independent variables	**Unstandardized Coefficients**		**t-value**	**p-value**	**Collinearity statistics**	
	Beta (β)	**S.E**			**Tolerance**	**VIF**
(Constant)	-.174	.055	-3.180	.002		
Net profit ratio (NPR)	.160	.108	1.484	.142	.340	2.939
Operating profit ratio (OPR)	.003	.001	2.334	**.022***	.339	2.951
Current Ratio (CR)	.000	.000	.010	.992	.972	1.029
Debt-Equity ratio (DER)	.000	.000	.484	.630	.989	1.011
Fixed asset turnover ratio (FATR)	.000	.000	.941	.350	.982	1.019
Asset turnover ratio (ATR)	.263	.043	6.173	**.000****	.925	1.081

Source: Calculated by Author. Adjusted R-square: 0.403; *p<0.05, **p<0.01. Dependent Variable: Return on Assets

The effect of profitability, liquidity, solvency and efficiency on the financial performance of equipment leasing companies of Indian NBFC is shown in table above. The statistical significance value clearly indicated that the independent variables namely, operating profit ratio and asset turnover ratio associated with the financial performance of the equipment leasing companies ($p<0.05$). However, the other independent variables namely, net profit ratio, current ratio, debt-equity ratio and fixed asset turnover ratio did not influence the financial performance significantly ($p>0.05$). The adjusted R-square value revealed that around 40 per cent of the changes in financial performance (ROA) of equipment leasing companies depended on the independent variables. Also, the multi-collinearity problem between the independent variables was within the control limit (VIF<5).

ROA as a function of profitability, liquidity, solvency and efficiency is as follows:

$$ROA = -0.174 + 0.160\ (NPR) + 0.003\ (OPR) + 0.263\ (ATR)$$

Only two variables are found to have significant impact on ROA. Hence the null hypothesis is selected.

Null hypothesis: H09- There is no significant relationship between NPR, OPM CR, DER, FATR, ATR and ROA of hire-purchase companies of NBFC:

Table 5.3.1. 9: Correlation analysis of financial ratios of hire-purchase companies of NBFC

		NPR	**CR**	**OPR**	**DER**	**FATR**	**ATR**	**ROA**
NPR	r-value	1	-.025	-.234**	.052	-.016	-.023	-.089
	p-value		.776	.005	.631	.865	.787	.285
CR	r-value		1	.086	-.040	.035	.002	.038
	p-value			.332	.717	.709	.979	.661
OPR	r-value			1	.014	.029	.019	.021
	p-value				.897	.758	.818	.798
DER	r-value				1	-.024	-.016	.027

	p-value					.837	.877	.800
FATR	r-value					1	.484**	-.024
	p-value						.000	.800
ATR	r-value						1	-.011
	p-value							.893
ROA	r-value							1
	p-value							

Source: Calculated by Author. NPR - Net profit ratio, OPR - Operating profit ratio, CR - Current Ratio, DER – Debt equity ratio, FATR – Fixed asset turnover ratio, ATR – Asset turnover ratio and ROA – Return on assets.

Table above shows correlation analysis of financial ratios of hire-purchase companies of NBFC. The findings revealed that net profit ratio and fixed asset turnover ratio were a relationship with operation profit ratio and asset turnover ratio respectively. Further, the Pearson correlation coefficient connoted that net profit ratio was weak negative correlation with operation profit ratio and fixed asset turnover ratio was a positive correlation with assets turnover ratio. Similarly, operation profit ratio and asset turnover ratio were a positive correlation with return on assets of infrastructure finance companies. However, current ratio, debt-equity ratio and return on assets failed to show the significant relationship with other financial ratios. Hence, the null hypothesis is selected.

Null hypothesis: H010- There is no significant impact of NPR, OPM CR, DER, FATR, and ATR on ROA for hire-purchase companies of NBFC

Table 5.3.1. 10: Influence of profitability, liquidity, solvency and efficiency on financial performance of hire-purchase companies.

Independent variables	**Unstandardized Coefficients**		**t-value**	**p-value**	**Collinearity statistics**	
	Beta (β)	**S.E**			**Tolerance**	**VIF**
(Constant)	.158	.031	5.061	.000		
Net profit ratio (NPR)	.064	.009	7.087	**.000****	.540	1.850
Operating profit ratio (OPR)	.000	.000	-4.415	**.000****	.537	1.861
Current Ratio (CR)	-.003	.003	-1.184	.241	.982	1.018
Debt-Equity ratio (DER)	.000	.000	.289	.774	.994	1.006
Fixed asset turnover ratio (FATR)	.000	.000	.304	.762	.750	1.333
Asset turnover ratio (ATR)	-.007	.008	-.923	.360	.747	1.339

Source: Calculated by Author. Adjusted R-square: 0.413; **p<0.01. Dependent Variable: Return on Assets

Table above presents the regression analysis for the independent variables namely, profitability, liquidity, solvency and efficiency ratios of investment companies and the dependent variable is a return on assets. In the regression analysis, financial performance (ROA) of hire-purchase companies of NBFC was 41 per cent depend on their profitability, liquidity, solvency and efficiency ratios. Among the ratios, the profitability ratios namely, net profit ratio and operating profit ratio did the significant influence on the financial performance of hire-purchase companies while the other ratios like current ratio, debt-equity ratio, fixed asset turnover ratio and asset turnover ratio did not a significant influence. In addition, the variation inflation factor

(VIF) of all independent variables was around 1. It could be concluded that there was no multi-collinearity problem within the independent variables. Therefore, the regression coefficients possessed the less variance. Then, it inferred that the precision of the results was good. Only two variables (NPR and OPR) are found to have significant impact on ROA and hence the null hypothesis is accepted.

The regression equation for the financial performance (ROA) of hire-purchase companies of NBFC can be written as follows:

ROA = 0.158 + 0.064 (NPR) -0.003 (CR) – 0.007 (ATR)

Table 5.3.1. 11: Summary Table

Hypothesis	Type of Statistical test used	Accept/ Reject
There is no significant relationship between NPR, OPM CR, DER, FATR, ATR and ROA of loan companies	Correlation	Partially Accepted
There is no significant impact of NPR, OPM CR, DER, FATR, ATR on ROA for loan companies	Regression	Accepted
There is no significant relationship between NPR, OPM CR, DER, FATR, ATR and ROA of investment companies of NBFCs	Correlation	Accepted
There is no significant impact of NPR, OPM CR, DER, FATR, and ATR on ROA for investment companies of NBFCs	Regression	Accepted

Source: Calculated by Author

5.4 Data Envelopment Analysis

In the study, data envelopment analysis (DEA) is used to measure the technical efficiency of NBFCs at different time periods (Years: 2001-2015). An online tool known as DEA OS is used for the calculation of technical efficiency wherein the tool is based on the approach devised by Farrell and his extended works in Charnes et al. (1995) and (Banker et al., 1984). DEA is a mathematical

programming technique which is used for the measurement of a DMUs efficiency relative to other DMUs (criterion being that all DMUs should be below the efficiency frontier) (Seiford & Thrall, 1990).DEA is also used to measure the relative efficiency of DMUs which are homogeneous and the use of multiple inputs for the production of multiple outputs (Charnes et al., 1995).Here, the technical efficiency is measured by the total liability, equity capital, operating profit and investments. The first two variables are considered as input variables while the other two variables are considered as output variables.

5.4.1 Data Envelopment Analysis for the year 2015

Table 5.4.1.1: Efficiency score of various NBFC for the year 2015

Companies	**Efficiency score**
Loan companies	0.88
Investment companies	1.00
Infrastructure finance companies	1.00
Equipment leasing companies	1.00
Hire-purchase companies	1.00

Source: Calculated by Author

The technical efficiency score of various NBFC for the year 2015 is shown in table above. From the analysis, it is inferred that the technical efficiencies of investment companies, infrastructure finance companies, equipment leasing companies and hire-purchase companies were efficient for the year 2015. Since, they had the efficiency score as 1.00. But, the loan companies of NBFC did not attain the well technical efficiency (Below 1).

Table 5.4.1.2: Reference group of inefficient companies for the year 2015

	Reference unit
Loan companies	Investment companies (0.176); Equipment leasing companies (6.249)

Source: Calculated by Author. (.) Denotes intensity values.

Table above shows the intensity variable of inefficient companies for the year 2015. The analysis revealed that the inefficient loan companies were compared with the efficient companies like investment companies and equipment leasing companies. On the basis of highest intensity values, equipment leasing companies were the appropriate reference unit for inefficient loan companies.

Table 5.4.1.3: Original and projected values of total liability and equity capital of inefficient NBFC for the year 2015

	Total liability		**Equity capital**	
	Original value	**Projected value**	**Original value**	**Projected value**
Loan companies	21174.2	18676.7	923.9	244.2

Source: Calculated by Author

Based on the DEA for the year 2015, loan companies of NBFC were identified as poor technical efficient companies. In order to improve the efficiency of loan companies, DEA analysis gave the original and projected value for total liability as well as equity capital. On the basis of the efficiency score of loan companies (88%) for the year 2015, 12 per cent of input variables were required to modify. Hence, the projected value of the total liability and equity capital were 18676.7 and 244.2 respectively.

Table 5.4.1.4: Original and projected values of operating profit and investments of inefficient NBFC for the year 2015

	Operating profit		**Investments**	
	Original value	**Projected value**	**Original value**	**Projected value**
Loan companies	2487	2487	1735.5	1735.5

Source: Calculated by Author

From the above table, there was no change required in the operating profit and investments of loan companies for the year 2015 in order to get good technical efficiency.

5.4.2 Data Envelopment Analysis for the year 2014

Table 5.4.2. 1: Efficiency score of various NBFC for the year 2014

Companies	**Efficiency score**
Loan companies	0.84
Investment companies	1.00
Infrastructure finance companies	1.00
Equipment leasing companies	1.00
Hire-purchase companies	0.98

Source: Calculated by Author

Table above presents the technical efficiency score of various NBFC for the year 2014. When considered the technical efficiency of NBFC companies for the year 2014, the following companies retained good technical efficiency namely, investment companies, infrastructure finance companies, equipment leasing companies. However, loan companies and hire-purchase companies did not receive the well technical efficiency. In order to attain the good technical efficiency, loan and hire-purchase companies' input and output values were necessary to change at 16 and 2 per cent respectively.

Table 5.4.2.2: Reference group of inefficient companies for the year 2014

	Reference unit
Loan companies	Investment companies (0.023); Equipment leasing companies (5.013)
Hire-purchase companies	Equipment leasing companies (3.034)

Source: Calculated by Author. (.) Denotes intensity values.

Table above shows the intensity variable of inefficient companies for the year 2014. From the above table, it is observed that the inefficient loan companies were compared with the efficient companies like investment companies and equipment leasing companies. On the basis of highest intensity values, equipment leasing companies were the appropriate reference unit for inefficient loan companies. Analogously, equipment leasing companies were the appropriate reference unit for the inefficient loan companies.

Table 5.4.2.3: Original and projected values of total liability and equity capital of inefficient NBFC for the year 2014

	Total liability		**Equity capital**	
	Original value	**Projected value**	**Original value**	**Projected value**
Loan companies	18111.6	15293.6	229.3	185.8
Hire-purchase companies	6466.3	6310.1	82.5	79.2

Source: Calculated by Author

DEA for the year 2015 clearly identified loan companies and hire-purchase companies of NBFC as poor technical efficient companies. In order to enhance the technical efficiency of the loan and hire-purchase companies, DEA analysis gave the original and projected value for total liability as well as equity capital. Hence, the projected value of the total liability and equity capital of loan companies were 1676.7 and 244.2 respectively. Likewise, the projected value of the total liability and equity capital of hire-purchase companies were 6310.1 and 79.2 respectively.

Table 5.4.2.4: Original and projected values of operating profit and investments of inefficient NBFC for the year 2014

	Operating profit		Investments	
	Original value	**Projected value**	**Original value**	**Projected value**
Loan companies	2139.1	2139.1	1586.6	1586.6
Hire-purchase companies	968.5	968.5	386.0	591.9

Source: Calculated by Author

Table above presents the original and projected values of operating profit and investments of inefficient NBFC for the year 2014. However, investments in hire-purchase companies needed to increase as 591.9 for the year 2014.

5.4.3 Data Envelopment Analysis for the year 2013

Table 5.4.3.1: Efficiency score of various NBFC for the year 2013

Companies	**Efficiency score**
Loan companies	0.99
Investment companies	1.00
Infrastructure finance companies	0.94
Equipment leasing companies	1.00
Hire-purchase companies	1.00

Source: Calculated by Author

Table above shows the technical efficiency score of various NBFC for the year 2013. On the basis of the highest efficiency score, investment companies, equipment leasing companies and hire-purchase companies possessed good technical efficiency for the year 2013 while loan companies and infrastructure finance companies did not attain the good technical efficiency. In order to receive the good technical efficiency, loan and infrastructure finance companies' input and output values were necessary to modify at 1 and 6 per cent respectively.

Table 5.4.3.2: Reference group of inefficient companies for the year 2013

	Reference unit
Loan companies	Investment companies (0.396);Hire-purchase companies (1.214)
Infrastructure finance companies	Equipment leasing companies (10.895)

Source: Calculated by Author. (.) Denotes intensity values.

Table above provides the intensity variable of inefficient companies for the year 2013. The above table revealed that the inefficient loan companies were compared with the efficient investment companies and hire-purchase companies. On the basis of highest intensity values, hire-purchase companies were the appropriate reference unit for inefficient loan companies. Likewise, inefficient infrastructure finance companies' reference unit was equipment leasing companies.

Table 5.4.3.3: Original and projected values of total liability and equity capital of inefficient NBFC for the year 2013

	Total liability		**Equity capital**	
	Original value	**Projected value**	**Original value**	**Projected value**
Loan companies	15307.7	15192.7	229.3	192.8
Infrastructure finance companies	29045.9	22832.4	299.1	282.2

Source: Calculated by Author

DEA for the year 2013 specified that loan companies and infrastructure finance companies of NBFC as poor technical efficient companies. In order to enhance the technical efficiency of the loan and infrastructure finance companies, DEA analysis provided the original and projected value for total liability as well as equity capital. The projected value of the total liability and equity capital of loan

companies were 15192.7 and 192.8 respectively. Likewise, the projected value of the total liability and equity capital of infrastructure finance companies were 22832.4 and 282.2 respectively.

Table 5.4.3.4: Original and projected values of operating profit and investments of inefficient NBFC for the year 2013

	Operating profit		**Investments**	
	Original value	**Projected value**	**Original value**	**Projected value**
Loan companies	1806.9	1806.9	1597.2	1597.2
Infrastructure finance companies	3062.7	3062.7	966.3	1644.1

Source: Calculated by Author

Table above presents the original and projected values of operating profit and investments of inefficient NBFC for the year 2013. There was no change required in the operating profit and investments of loan companies for the year 2013 in order to get good technical efficiency. But, more investments were required in infrastructure finance companies to receive the good technical efficiency.

5.4.4 Data Envelopment Analysis for the year 2012

Table 5.4.4.1: Efficiency score of various NBFC for the year 2012

Companies	**Efficiency score**
Loan companies	1.00
Investment companies	1.00
Infrastructure finance companies	0.70
Equipment leasing companies	1.00
Hire-purchase companies	1.00

Source: Calculated by Author

The technical efficiency score of various NBFC for the year 2012 is depicted in table 26. Loan companies, investment companies, equipment leasing companies and hire-purchase companies possessed good technical efficiency for the year 2012 on

the basis of the highest efficiency score while infrastructure finance companies did not achieve the good technical efficiency for the year 2012. In order to receive the good technical efficiency, infrastructure finance companies' total liability, equity capital, operating profit and investments values needed to modify at 30 per cent.

Table 5.4.4.2: Reference group of inefficient companies for the year 2012

	Reference unit
Infrastructure finance companies	Equipment leasing companies (6.584), Hire-purchase companies (1.159)

Source: Calculated by Author. (.) Denotes intensity values

Table above presents the intensity variable of inefficient companies for the year 2012. The above table revealed that the inefficient infrastructure finance companies were compared with the efficient equipment leasing companies and hire-purchase companies. Based on the highest intensity values, equipment leasing companies were the more appropriate reference unit for inefficient infrastructure finance companies compared to hire purchase companies.

Table 5.4.4.3: Original and projected values of total liability and equity capital of inefficient NBFC for the year 2012

	Total liability		**Equity capital**	
	Original value	**Projected value**	**Original value**	**Projected value**
Infrastructure finance companies	23946.2	16757.9	298.8	209.1

Source: Calculated by Author

DEA for the year 2014 identified that infrastructure finance companies of NBFC as poor technical efficient companies. In order to increase the technical efficiency of the infrastructure finance companies, DEA analysis provided the original and projected value for total liability and equity capital. The projected value of the

total liability and equity capital of infrastructure finance companies were 16757.9 and 209.1 respectively.

Table 5.4.4.4: Original and projected values of operating profit and investments of inefficient NBFC for the year 2012

	Operating profit		**Investments**	
	Original value	**Projected value**	**Original value**	**Projected value**
Infrastructure finance companies	2326.7	2326.7	949.8	1153.8

Source: Calculated by Author

From the above table, it is concluded that investments in infrastructure finance companies were necessary to increase for receiving good technical efficiency in the year of 2012.

5.4.5 Data Envelopment Analysis for the year 2011

Table 5.4.5.1: Efficiency score of various NBFC for the year 2011

Companies	**Efficiency score**
Loan companies	1.00
Investment companies	1.00
Infrastructure finance companies	0.67
Equipment leasing companies	1.00
Hire-purchase companies	1.00

Source: Calculated by Author

Table above shows the technical efficiency score of various NBFC for the year 2011. On the basis of the highest efficiency score, loan companies, investment companies, equipment leasing companies and hire-purchase companies possessed sufficient technical efficiency for the year 2011 while infrastructure finance companies did not attain the good technical efficiency. In order to receive the good technical efficiency, infrastructure finance companies' input and output values were necessary to alter at 33 per cent.

Table 5.4.5.2: Reference group of inefficient companies for the year 2011

	Reference unit
Infrastructure finance companies	Equipment leasing companies (3.419), Hire-purchase companies (2.169)

Source: Calculated by Author. (.) Denotes intensity values

Reference group of inefficient companies for the year 2011 is depicted in table 30. From the above table, it is observed that equipment leasing companies and hire purchase companies were identified as a reference unit of infrastructure finance companies of NBFC for the year 2011. Meanwhile, on the basis of the highest intensity values, equipment leasing companies were the more appropriate reference unit for inefficient infrastructure finance companies compared to hire purchase companies.

Table 5.4.5.3: Original and projected values of total liability and equity capital of inefficient NBFC for the year 2011

	Total liability		**Equity capital**	
	Original value	**Projected value**	**Original value**	**Projected value**
Infrastructure finance companies	18874.3	12588.2	281.6	187.8

Source: Calculated by Author

DEA for the year 2011 found out that infrastructure finance companies of NBFC as poor technical efficient companies. In order to increase the technical efficiency of the infrastructure finance companies, DEA analysis provided the original and projected value for total liability and equity capital. The projected value of the total liability and equity capital of infrastructure finance companies were 12588.2 and 187.8 respectively.

Table 5.4.5.4: Original and projected values of operating profit and investments of inefficient NBFC for the year 2011

	Operating profit		Investments	
	Original value	**Projected value**	**Original value**	**Projected value**
Infrastructure finance companies	1847.4	1847.4	985.7	1264.5

Source: Calculated by Author

Table 33 shows the original and projected values of operating profit and investments of inefficient NBFC for the year 2011. From the above table, it is concluded that investments in infrastructure finance companies were necessary to increase as 1264.5 for receiving good technical efficiency in the year of 2011.

5.4.6 Data Envelopment Analysis for the year 2010

Table 5.4.6.1: Efficiency score of various NBFC for the year 2010

Companies	**Efficiency score**
Loan companies	1.00
Investment companies	1.00
Infrastructure finance companies	0.55
Equipment leasing companies	1.00
Hire-purchase companies	1.00

Source: Calculated by Author

The technical efficiency score of various NBFC for the year 2010 is shown in table above. Loan companies, investment companies, equipment leasing companies and hire-purchase companies had the good technical efficiency for the year 2010 based on the highest efficiency score while infrastructure finance companies did not attain the good technical efficiency for the year 2010. In order to gain the good technical efficiency, infrastructure finance companies' input and output values required changing at 45 per cent.

Table 5.4.6.2: Reference group of inefficient companies for the year 2010

	Reference unit
Infrastructure finance companies	Loan companies (0.372), Equipment leasing companies (7.285)

Source: Calculated by Author. (.) Denotes intensity values

Table above shows the intensity variable of inefficient companies for the year 2010. The above table indicates that the inefficient infrastructure finance companies were compared with the efficient equipment leasing companies and loan companies. Based on the highest intensity values, equipment leasing companies were the more appropriate reference unit for inefficient infrastructure finance companies compared to loan companies.

Table 5.4.6.3: Original and projected values of total liability and equity capital of inefficient NBFC for the year 2010

	Total liability		**Equity capital**	
	Original value	**Projected value**	**Original value**	**Projected value**
Infrastructure finance companies	25007.5	13577.8	279.3	152.5

Source: Calculated by Author

DEA for the year 2010 deducted that infrastructure finance company of NBFC as poor technical efficient companies. In order to increase the technical efficiency of the infrastructure finance companies, DEA analysis gave the original and projected value for total liability and equity capital. The projected value of the total liability and equity capital of infrastructure finance companies were 13577.8 and 152.5 respectively.

Table 5.4.6.4: Original and projected values of operating profit and investments of inefficient NBFC for the year 2010

	Operating profit		Investments	
	Original value	**Projected value**	**Original value**	**Projected value**
Infrastructure finance companies	1449.2	1449.2	966.6	966.6

Source: Calculated by Author

The findings revealed that there was no change required in the operating profit and investments of infrastructure finance companies for the year 2010 in order to get good technical efficiency.

5.4.7 Data Envelopment Analysis for the year 2009

Table 5.4.7.1: Efficiency score of various NBFC for the year 2009

Companies	**Efficiency score**
Loan companies	1.00
Investment companies	1.00
Infrastructure finance companies	0.50
Equipment leasing companies	1.00
Hire-purchase companies	1.00

Source: Calculated by Author

Table above presents the technical efficiency score of various NBFC for the year 2009. On the basis of the highest efficiency score, loan companies, investment companies, equipment leasing companies and hire-purchase companies possessed the good technical efficiency for the year 2009 while infrastructure finance companies did not achieve the good technical efficiency. In order to get the good technical efficiency, 50 per cent of input and output values of infrastructure finance companies were required to change.

Table 5.4.7.2: Reference group of inefficient companies for the year 2009

	Reference unit
Infrastructure finance companies	Loan companies (0.159), Equipment leasing companies (7.301)

Source: Calculated by Author. (.) Denotes intensity values

Table above shows the intensity variable of inefficient companies for the year 2009. The above table specified that the inefficient infrastructure finance companies were compared with the efficient equipment leasing companies and loan companies. Based on the highest intensity values, equipment leasing companies were the more appropriate reference unit for inefficient infrastructure finance companies compared to loan companies.

Table 5.4.7.3: Original and projected values of total liability and equity capital of inefficient NBFC for the year 2009

	Total liability		**Equity capital**	
	Original value	**Projected value**	**Original value**	**Projected value**
Infrastructure finance companies	20702.3	9199.9	264.4	131.8

Source: Calculated by Author

DEA for the year 2009 specified that infrastructure finance companies of NBFC as poor technical efficient companies. In order to increase the technical efficiency of the infrastructure finance companies, DEA analysis gave the original and projected value for total liability and equity capital. The projected value of the total liability and equity capital of infrastructure finance companies were 9199.9 and 131.8 respectively.

Table 5.4.7.4: Original and projected values of operating profit and investments of inefficient NBFC for the year 2009

	Operating profit		**Investments**	
	Original value	**Projected value**	**Original value**	**Projected value**
Infrastructure finance companies	1138.9	1138.9	707.1	707.1

Source: Calculated by Author

From the above table, it is inferred that there was no change required in the operating profit and investments of infrastructure finance companies for the year 2009 in order to get good technical efficiency.

5.4.8 Data Envelopment Analysis for the year 2008

Table 5.4.8.1: Efficiency score of various NBFC for the year 2008

Companies	**Efficiency score**
Loan companies	1.00
Investment companies	0.94
Infrastructure finance companies	0.43
Equipment leasing companies	1.00
Hire-purchase companies	0.95

Source: Calculated by Author

The technical efficiency score of various NBFC for the year 2008 is shown in table 42. Loan companies and equipment leasing companies had the good technical efficiency for the year 2008 on the basis of the highest efficiency score while investment, infrastructure finance and hire-purchase companies did not attain the good technical efficiency for the year 2008. In order to get the good technical efficiency, input and output values of investment, infrastructure finance and hire-purchase companies needed to modify at 6, 57 and 5 per cent respectively.

Table 5.4.8.2: Reference group of inefficient companies for the year 2008

	Reference unit
Investment companies	Loan companies (1.207)
Infrastructure finance companies	Loan companies (0.618), Equipment leasing companies (3.653)
Hire-purchase companies	Loan companies (0.278), Equipment leasing companies (0.647)

Source: Calculated by Author. (.) Denotes intensity values:

Table above presents reference group of inefficient companies for the year 2008. From the above table, it is observed that the inefficient investment companies were compared with efficient loan companies followed by, inefficient infrastructure finance and hire-purchase companies were compared with the efficient equipment leasing companies and loan companies. Based on the highest intensity values,

equipment leasing companies were the more appropriate reference unit for inefficient infrastructure finance companies as well as hire-purchase companies.

Table 5.4.8.3: Original and projected values of total liability and equity capital of inefficient NBFC for the year 2008

	Total liability		**Equity capital**	
	Original value	**Projected value**	**Original value**	**Projected value**
Investment companies	7020	6591.3	186.8	155.1
Infrastructure finance companies	17078.5	7301.1	264.4	113.0
Hire-purchase companies	2337.3	2212.4	44	41.65

Source: Calculated by Author

DEA for the year 2008 revealed that investment, infrastructure finance and hire-purchase companies of NBFC as poor technical efficient companies. In order to augment the technical efficiency of the inefficient companies, DEA analysis gave the original and projected value for total liability and equity capital. The projected value of the total liability and equity capital of investment companies were 6591.3 and 155.8 respectively. Likewise, the projected value of the total liability and equity capital of infrastructure finance companies were 7301.1 and 113.0 respectively. Finally, the projected value of the total liability and equity capital of hire-purchase companies were 2212.4 and 41.65 respectively.

Table 5.4.8.4: Original and projected values of operating profit and investments of inefficient NBFC for the year 2008

	Operating profit		**Investments**	
	Original value	**Projected value**	**Original value**	**Projected value**

Investment companies	668.4	829.8	883.4	883.4
Infrastructure finance companies	838.9	863.6	703.7	703.7
Hire-purchase companies	268.7	268.7	33.3	247.8

Source: Calculated by Author

Original and projected values of operating profit and investments of inefficient NBFC for the year 2008 is presented in table 44. The findings clearly revealed that operating profit values of investment and infrastructure companies were required to increase for gaining good technical efficiency while investments values needed to be increased in the hire-purchase companies of NBFC.

5.4.9 Data Envelopment Analysis for the year 2007

Table 5.4.9.1: Efficiency score of various NBFC for the year 2007

Companies	**Efficiency score**
Loan companies	1.00
Investment companies	0.78
Infrastructure finance companies	0.45
Equipment leasing companies	1.00
Hire-purchase companies	0.84

Source: Calculated by Author

Table above shows the technical efficiency score of various NBFC for the year 2007. On the basis of the highest efficiency score, loan companies and equipment leasing companies possessed the good technical efficiency for the year 2007 while investment, infrastructure finance and hire-purchase companies did not achieve the good technical efficiency. In order to get the good technical efficiency, investment, infrastructure finance and hire-purchase companies' input and output values required modifying at 22, 55 and 16 per cent respectively.

Table 5.4.9.2: Reference group of inefficient companies for the year 2007

	Reference unit
Investment companies	Loan companies (0.783)
Infrastructure finance companies	Loan companies (0.745), Equipment leasing companies (2.735)
Hire-purchase companies	Loan companies (0.230)

Source: Calculated by Author. (.) Denotes intensity values

Table above shows reference group of inefficient companies for the year 2007. From the above table, it is observed that the loan companies were the reference unit of inefficient investment and hire-purchase companies followed by equipment leasing companies were the reference unit of inefficient infrastructure finance companies.

Table 5.4.9.3: Original and projected values of total liability and equity capital of inefficient NBFC for the year 2007

	Total liability		**Equity capital**	
	Original value	**Projected value**	**Original value**	**Projected value**
Investment companies	5195.8	4040.97	181	88.68
Infrastructure finance companies	14056.8	6279.5	237.8	106.2
Hire-purchase companies	1403.7	1186.5	39.2	26.0

Source: Calculated by Author

DEA for the year 2007 specified that investment, infrastructure finance and hire-purchase companies of NBFC as poor technical efficient companies. In order to increase the technical efficiency of the inefficient companies, DEA analysis presented the original and projected value for total liability and equity capital. The projected value of the total liability and equity capital of investment companies were 4040.97

and 88.68 respectively. Likewise, the projected value of the total liability and equity capital of infrastructure finance companies were 6279.5 and 106.2 respectively. Finally, the projected value of the total liability and equity capital of hire-purchase companies were 1186.5 and 26.0 respectively.

Table 5.4.9.4: Original and projected values of operating profit and investments of inefficient NBFC for the year 2007

	Operating profit		**Investments**	
	Original value	**Projected value**	**Original value**	**Projected value**
Investment companies	460.8	460.8	451.6	716.3
Infrastructure finance companies	645.3	645.3	307.1	827.9
Hire-purchase companies	135.3	135.3	41.5	210.3

Source: Calculated by Author

From the above table, investments of infrastructure finance, hire-purchase and investment companies of NBFC were necessary to change as 827.9, 210.3 and 716.3 respectively for getting good technical efficiency.

5.4.10 Data Envelopment Analysis for the year 2006

Table 5.4.10.1: Efficiency score of various NBFC for the year 2006

Companies	**Efficiency score**
Loan companies	1.00
Investment companies	0.93
Infrastructure finance companies	0.55
Equipment leasing companies	1.00
Hire-purchase companies	1.00

Source: Calculated by Author

The technical efficiency score of various NBFC for the year 2006 is presented in table above. Loan companies, equipment leasing and hire-purchase companies possessed the good technical efficiency for the year 2006 based on the highest

efficiency score while investment and infrastructure finance companies did not attain the good technical efficiency for the year 2006. In order to get the good technical efficiency, input and output values of investment and infrastructure finance companies needed to modify at 7 and 45 per cent respectively.

Table 5.4.10.2: Reference group of inefficient companies for the year 2006

	Reference unit
Investment companies	Loan companies (0.360), Hire-purchase companies (2.923)
Infrastructure finance companies	Equipment leasing companies (6.950), Hire-purchase companies (1.906)

Source: Calculated by Author. (.) Denotes intensity values

Table above provides reference group of inefficient companies for the year 2006. From the above table, it is inferred that the inefficient investment companies were compared with efficient hire-purchase and loan companies followed by, inefficient infrastructure finance companies were compared with the efficient equipment leasing companies and hire-purchase companies. Based on the highest intensity values, equipment leasing companies were the more appropriate reference unit for inefficient infrastructure finance and investment companies.

Table 5.4.10.3: Original and projected values of total liability and equity capital of inefficient NBFC for the year 2006

	Total liability		**Equity capital**	
	Original value	**Projected value**	**Original value**	**Projected value**
Investment companies	4092	3812.5	163	140.3
Infrastructure finance companies	11112.4	6083.45	220.2	120.5

Source: Calculated by Author

DEA for the year 2006 indicated that investment and infrastructure finance companies of NBFC as poor technical efficient companies. In order to enhance the technical efficiency of the inefficient companies, DEA analysis presented the original and projected value for total liability and equity capital. The projected value of the total liability and equity capital of investment companies were 3812.5 and 140.3 respectively. Likewise, the projected value of the total liability and equity capital of infrastructure finance companies were 6083.45 and 120.5 respectively.

Table 5.4.10.4: Original and projected values of operating profit and investments of inefficient NBFC for the year 2006

	Operating profit		**Investments**	
	Original value	**Projected value**	**Original value**	**Projected value**
Investment companies	372.5	372.5	373.3	373.3
Infrastructure finance companies	521	521	178.4	421.0

Source: Calculated by Author

From the above table, it is inferred that there was no alteration required in operating profit and investments of investment companies in order to get good technical efficiency. However, investments in infrastructure finance companies were required to change as 421.0 instead of 178.4 for receiving the good technical efficiency.

5.4.11 Data Envelopment Analysis for the year 2005

Table 5.4.11. 1: Efficiency score of various NBFC for the year 2005

Companies	**Efficiency score**
Loan companies	1.00
Investment companies	1.00
Infrastructure finance companies	0.94

Equipment leasing companies	1.00
Hire-purchase companies	1.00

Source: Calculated by Author.

Table above presents the technical efficiency score of various NBFC for the year 2005. Based on the highest efficiency score, loan, investment, equipment leasing and hire-purchase companies had the good technical efficiency for the year 2005 while infrastructure finance companies did not attain the good technical efficiency. In order to gain the good technical efficiency, infrastructure finance companies' input and output values were required to modify at 6 per cent.

Table 5.4.11. 2: Reference group of inefficient companies for the year 2005

	Reference unit
Infrastructure finance companies	Investment companies (1.500), Hire-purchase companies (0.764)

Source: Calculated by Author. () Denotes intensity values

Table above shows reference group of inefficient companies for the year 2005. From the above table, it is observed that the efficient investment companies were the reference unit of inefficient infrastructure finance companies based on the highest intensity value.

Table 5.4.11. 3: Original and projected values of total liability and equity capital of inefficient NBFC for the year 2005

	Total liability		**Equity capital**	
	Original value	**Projected value**	**Original value**	**Projected value**
Infrastructure finance companies	5993.2	5650.9	229.2	216.1

Source: Calculated by Author

DEA for the year 2005 specified that infrastructure finance companies of NBFC as poor technical efficient companies. In order to increase the technical

efficiency of the infrastructure finance companies, DEA analysis gave the original and projected value for total liability and equity capital. The projected value of the total liability and equity capital of infrastructure finance companies were 5650.9 and 216.1 respectively.

Table 5.4.11. 4: Original and projected values of operating profit and investments of inefficient NBFC for the year 2005

	Operating profit		**Investments**	
	Original value	**Projected value**	**Original value**	**Projected value**
Infrastructure finance companies	580.6	580.6	241.3	340.9

Source: Calculated by Author

For attaining efficient infrastructure finance companies, investments values were necessary to change as 340.9 instead of 241.3.

5.4.12 Data Envelopment Analysis for the year 2004

Table 5.4.12.1: Efficiency score of various NBFC for the year 2004

Companies	**Efficiency score**
Loan companies	1.00
Investment companies	0.94
Infrastructure finance companies	1.00
Equipment leasing companies	1.00
Hire-purchase companies	1.00

Source: Calculated by Author

Table above presents the technical efficiency score of various NBFC for the year 2004. On the basis of the highest efficiency score, loan companies, infrastructure finance, equipment leasing and hire-purchase companies had the good technical efficiency for the year 2004 while investment companies did not attain the good

technical efficiency. In order to get the good technical efficiency, input and output values of investment companies required changing at 6 per cent.

Table 5.4.12.2: Reference group of inefficient companies for the year 2004

	Reference unit
Investment companies	Infrastructure finance companies (0.072), Equipment leasing companies (2.915) and Hire-purchase companies (4.428)

Source: Calculated by Author. () denotes intensity values

Table above shows reference group of inefficient companies for the year 2004. From the above table, it is observed that the inefficient investment companies were compared with efficient infrastructure finance, equipment leasing and hire-purchase. Based on the highest intensity values, hire-purchase companies were the more appropriate reference unit for inefficient investment companies.

Table 5.4.12.3: Original and projected values of total liability and equity capital of inefficient NBFC for the year 2004

	Total liability		**Equity capital**	
	Original value	**Projected value**	**Original value**	**Projected value**
Investment companies	3091.9	2904.1	138.7	130.3

Source: Calculated by Author

DEA for the year 2004 specified that investment companies of NBFC as poor technical efficient companies. In order to augment the technical efficiency of the investment companies, DEA analysis gave the original and projected value for total liability and equity capital. The projected value of the total liability and equity capital of investment companies were 2904.1 and 130.3 respectively.

Table 5.4.12.4: Original and projected values of operating profit and investments of inefficient NBFC for the year 2004

	Operating profit		Investments	
	Original value	**Projected value**	**Original value**	**Projected value**
Investment companies	315.0	315.0	198.2	198.2

Source: Calculated by Author

From the above table, it is inferred that there was no change required in the operating profit and investments of investment companies for the year 2004 in order to get good technical efficiency.

5.4.13 Data Envelopment Analysis for the year 2003

Table 5.4.13.1: Efficiency score of various NBFC for the year 2003

Companies	Efficiency score
Loan companies	1.00
Investment companies	0.83
Infrastructure finance companies	0.86
Equipment leasing companies	1.00
Hire-purchase companies	0.98

Source: Calculated by Author

The technical efficiency score of various NBFC for the year 2003 is shown in table above. Loan and equipment leasing companies possessed the good technical efficiency for the year 2003 based on the highest efficiency score while investment, infrastructure finance and hire-purchase companies did not attain the good technical efficiency for the year 2003. In order to get the good technical efficiency, input and output values of investment, infrastructure finance and hire-purchase companies were necessary to modify at 17, 14 and 2 percent respectively.

Table 5.4.13.2: Reference group of inefficient companies for the year 2003

	Reference unit
Investment companies	Loan companies (0.022), Equipment leasing companies (6.355)

Infrastructure finance companies	Equipment leasing companies (11.763)
Hire-purchase companies	Equipment leasing companies (0.949)

Source: Calculated by Author. (.) Denotes intensity values

Table above presents reference group of inefficient companies for the year 2003. From the above table, it is observed that the inefficient investment companies were compared with the efficient loan, and equipment leasing companies. Based on the highest intensity values, equipment leasing companies were the more appropriate reference unit for inefficient investment, infrastructure and hire-purchase companies.

Table 5.4.13.3: Original and projected values of total liability and equity capital of inefficient NBFC for the year 2003

	Total liability		**Equity capital**	
	Original value	**Projected value**	**Original value**	**Projected value**
Investment companies	2381.1	1978.3	141.3	45.4
Infrastructure finance companies	4074.4	3510.2	229.2	79.9
Hire-purchase companies	288.1	283.3	18.4	6.4

Source: Calculated by Author

DEA for the year 2003 deducted that investment, infrastructure finance and hire-purchase companies of NBFC as poor technical efficient companies. In order to increase the technical efficiency of the inefficient companies, DEA analysis provided the original and projected value for total liability and equity capital. The projected value of the total liability and equity capital of investment companies were 1978.3 and 45.4 respectively. Similarly, the projected value of the total liability and equity capital of infrastructure finance companies were 3510.2 and 79.9 respectively. Finally, the

projected value of the total liability and equity capital of hire-purchase companies were 283.3 and 6.4 respectively.

Table 5.4.13.4: Original and projected values of operating profit and investments of inefficient NBFC for the year 2003

	Operating profit		Investments	
	Original value	**Projected value**	**Original value**	**Projected value**
Investment companies	266.7	266.7	217.3	217.3
Infrastructure finance companies	487	487	99.1	368.2
Hire-purchase companies	39.3	39.3	24.9	29.7

Source: Calculated by Author

In order to get the good technical efficiency, there was no modification necessary in the operating profit and investments of inefficient investment companies for the year 2003. However, investments in infrastructure finance and hire-purchase were required to modify as 368.2 and 29.7 respectively for attaining good technical efficiency.

5.4.14 Data Envelopment Analysis for the year 2002

Table 5.5.14. 1: Efficiency score of various NBFC for the year 2002

Companies	**Efficiency score**
Loan companies	1.00
Investment companies	0.75
Infrastructure finance companies	0.71
Equipment leasing companies	1.00
Hire-purchase companies	0.82

Source: Calculated by Author

Table above presents the technical efficiency score of various NBFC for the year 2002. On the basis of highest efficiency score, loan and equipment leasing companies had the good technical efficiency for the year 2002 while investment,

infrastructure and hire-purchase companies did not attain the good technical efficiency. In order to get the good technical efficiency, input and output values of investment, infrastructure and hire-purchase companies required changing at 25, 29 and 18 per cent respectively.

Table 54.14. 2: Reference group of inefficient companies for the year 2002

	Reference unit
Investment companies	Loan companies (0.199), Equipment leasing companies (3.977)
Infrastructure finance companies	Equipment leasing companies (9.169)
Hire-purchase companies	Loan companies (0.001), Equipment leasing companies (0.817)

Source: Calculated by Author. (.) Denotes intensity values

Table above shows reference group of inefficient companies for the year 2002. From the above table, it is observed that the inefficient investment companies were compared with the efficient loan, and equipment leasing companies. Based on the highest intensity values, equipment leasing companies were the more appropriate reference unit for inefficient investment, infrastructure and hire-purchase companies.

Table 54.14.3: Original and projected values of total liability and equity capital of inefficient NBFC for the year 2002

	Total liability		**Equity capital**	
	Original value	**Projected value**	**Original value**	**Projected value**
Investment companies	2242.8	1690.3	141.2	46.7
Infrastructure finance companies	3289.9	2341.6	212.5	62.3
Hire-purchase companies	257.6	210.8	16.9	5.6

Source: Calculated by Author

DEA for the year 2002 specified that investment, infrastructure finance and hire-purchase companies of NBFC as poor technical efficient companies. In order to increase the technical efficiency of the inefficient companies, DEA analysis provided the original and projected value for total liability and equity capital. The projected value of the total liability and equity capital of investment companies were 1690.3 and 46.7 respectively. Similarly, the projected value of the total liability and equity capital of infrastructure finance companies were 2341.6 and 62.3 respectively. Finally, the projected value of the total liability and equity capital of hire-purchase companies were 210.8 and 5.6 respectively.

Table 5.4.14. 4: Original and projected values of operating profit and investments of inefficient NBFC for the year 2002

	Operating profit		**Investments**	
	Original value	**Projected value**	**Original value**	**Projected value**
Loan companies	327.7	327.7	790	790
Infrastructure finance companies	391.5	391.5	22	260.4
Hire-purchase companies	35.1	35.1	23.7	23.7

Source: Calculated by Author

Table above revealed that there was no modification necessary in the operating profit and investments of the inefficient loan and hire-purchase companies for the year 2002. However, investments in infrastructure finance were required to modify as 260.4 instead of 22 for attaining good technical efficiency.

5.4.15 Data Envelopment Analysis for the year 2001

Table 5.4.15.1: Efficiency score of various NBFC for the year 2001

Companies	**Efficiency score**

Loan companies	0.93
Investment companies	1.00
Infrastructure finance companies	0.65
Equipment leasing companies	1.00
Hire-purchase companies	0.74

Source: Calculated by Author

The technical efficiency score of various NBFC for the year 2001 is presented in table 70. Investment and equipment leasing companies possessed the good technical efficiency for the year 2001 on the basis of the highest efficiency score while loan, infrastructure finance and hire-purchase companies did not attain the good technical efficiency for the year 2001. In order to get the good technical efficiency, input and output values of the loan, infrastructure finance and hire-purchase companies need to modify at 7, 35 and 26 per cent respectively.

Table 5.4.15.2: Reference group of inefficient companies for the year 2001

	Reference unit
Loan companies	Investment companies (1.097), Equipment leasing companies (7.311)
Infrastructure finance companies	Equipment leasing companies (3.232)
Hire-purchase companies	Investment companies (0.020), Equipment leasing companies (0.611)

Source: Calculated by Author. (.) Denotes intensity values

Table above presents reference group of inefficient companies for the year 2001. The above table revealed that the inefficient loan companies were compared with efficient investment and equipment leasing companies. On the basis of the highest intensity values, equipment leasing companies were the more appropriate reference unit for an inefficient loan, infrastructure and hire-purchase companies.

Table 5.4.15.3: Original and projected values of total liability and equity capital of inefficient NBFC for the year 2001

	Total liability		**Equity capital**	
	Original value	**Projected value**	**Original value**	**Projected value**
Loan companies	3311.6	2544.9	98.3	91.8
Infrastructure finance companies	1259.6	816.9	206.9	21.9
Hire-purchase companies	226.7	167.2	16.1	4.9

Source: Calculated by Author

DEA for the year 2001 indicated that loan, infrastructure finance and hire-purchase companies of NBFC as poor technical efficient companies. In order to increase the technical efficiency of the inefficient companies, DEA analysis provided the original and projected value for total liability and equity capital. The projected value of the total liability and equity capital of loan companies were 2544.9 and 91.8 respectively. Similarly, the projected value of the total liability and equity capital of infrastructure finance companies were 816.9 and 21.9 respectively. Finally, the projected value of the total liability and equity capital of hire-purchase companies were 167.2 and 4.9 respectively.

Table 5.4.15.4: Original and projected values of operating profit and investments of inefficient NBFC for the year 2001

	Operating profit		**Investments**	
	Original value	**Projected value**	**Original value**	**Projected value**
Loan companies	358.5	358.5	595.1	595.1
Infrastructure finance companies	149.3	149.3	12.7	74.9
Hire-purchase companies	28.6	28.6	22	22

Source: Calculated by Author

From the above table, it is observed that there was no modification necessary in the operating profit and investments of the inefficient loan and hire-purchase companies for the year 2001. However, investments in infrastructure finance were required to modify as 74.9 instead of 12.7 for attaining good technical efficiency.

5.5 Summary of findings

Correlation and regression analysis generally provide the association information between the study parameters (variables). Specifically, linear relationship between two variables can be ascertained through correlation analysis while regression analysis gives the cause and effect relationship between the variables. The profitability ratios such as net profit ratio and operating profit ratio were a positive relation with one another. Also, the profitability ratios were a positive relation with return on assets ($P<0.01$). It could be concluded that profitability ratios increase in value, it leads to enhance the return on assets. Likewise, the fixed asset turnover ratio was a positive relation with asset turnover ratio ($p<0.01$) and return on assets ($p<0.01$). Further, asset turnover ratio was a strong positive correlation with return on assets ($p<0.01$). However, liquidity ratio and solvency ratio did not correlate with any profitability and efficiency ratio.

In the analysis, the financial performance of the companies is computed on the basis of return on assets. The coefficient of determination (Adjusted R-square = 0.684) connoted that around 68 per cent of change in the financial performance of loan companies depended on the independent variables such as profitability, liquidity, solvency and efficiency ratios. The significance values ($p<0.05$) indicated that efficiency ratios such as fixed asset turnover ratio and asset turnover ratio did the significant influence on the performance of loan companies of Indian NBFC while the profitability ratios, liquidity ratio and solvency ratio ($p>0.05$) did not a significant

influence on the financial performance.A Linear relationship between the financial parameters of investment companies of Indian NBFC is depicted in table above. The statistical significance values ($p<0.01$) interpreted that net profit ratio was correlated with operating profit ratio and return on assets. Further, the Pearson correlation coefficient (r-value) indicated that net profit ratio was a weak positive relation with return on assets ($r=0.343$) while it was a negative relation with operating profit ratio. But, the liquidity and solvency ratios of investment companies failed to reveal the significant relationship with the other financial ratios. Hence, the null hypothesis is accepted as significant relationship exists only between NPR and OPR, and NPR and ROA. financial performance (ROA) of investment companies of NBFC was 55 per cent depend on their profitability, liquidity, solvency and efficiency ratios. Among the ratios, net profit ratio made the significant impact on the financial performance of investment companies while the other ratios like operating profit ratio, current ratio, debt-equity ratio, fixed asset turnover ratio and asset turnover ratio did not a significant influence. In addition, the variation inflation factor (VIF) of all independent variables was around 1. It could be inferred that there was no multi-collinearity problem within the independent variables. Therefore, the regression coefficients possessed the less variance. It could increase the precision of the results.The findings revealed that net profit ratio was correlated with operation profit ratio and return on assets based on the 1 per cent level of significance. Additionally, the Pearson correlation coefficient indicated that net profit ratio was a strong positive correlation with operation profit ratio while it was a weak positive correlation with return on assets. Similarly, operation profit ratio and asset turnover ratio were a positive correlation with return on assets of infrastructure finance companies. Hence the alternative hypothesis, ‘There is a significant relationship between NPR, OPM

CR, DER, FATR, ATR and ROA of Infrastructure finance companies of NBFC' is partially accepted.

The coefficient of determination (Adjusted R-square = 0.684) specified that 64 per cent of the variation in the financial performance of infrastructure finance companies depended on the following independent variables namely, profitability, liquidity, solvency and efficiency ratios. Based on the significance values, net profit ratio and efficiency ratios such as fixed asset turnover ratio and asset turnover ratio did the significant impact on the performance of infrastructure finance companies of Indian NBFC while liquidity and solvency ratios ($p>0.05$) did not a significant influence on the financial performance (ROA). In the regression model, the multi-collinearity problem occurred in acceptable level (VIF<5).The statistical significance value clearly indicated that the independent variables namely, operating profit ratio and asset turnover ratio associated with the financial performance of the equipment leasing companies ($p<0.05$). However, the other independent variables namely, net profit ratio, current ratio, debt-equity ratio and fixed asset turnover ratio did not influence the financial performance significantly ($p>0.05$). The adjusted R-square value revealed that around 40 per cent of the changes in financial performance (ROA) of equipment leasing companies depended on the independent variables. Also, the multi-collinearity problem between the independent variables was within the control limit (VIF<5).

From the statistical significance values ($p<0.01$), it is observed that there was some relation between net profit ratio and operating profit ratio. Also, the Pearson correlation coefficient (r-value) interpreted that net profit ratio was a positive relation with operating profit ratio ($r=0.660$). Analogously, net profit ratio was a positive correlation with return on assets ($r=0.450$). Return on assets did the positive relation

with operating profit ratio (r=0.514) and asset turnover ratio (r=0.412). However, current ratio, debt-equity ratio and fixed asset turnover ratio of equipment leasing companies did not relation with any other financial ratios.The findings revealed that net profit ratio and fixed asset turnover ratio were a relationship with operation profit ratio and asset turnover ratio respectively. Further, the Pearson correlation coefficient connoted that net profit ratio was weak negative correlation with operation profit ratio and fixed asset turnover ratio was a positive correlation with assets turnover ratio. Similarly, operation profit ratio and asset turnover ratio were a positive correlation with return on assets of infrastructure finance companies. However, current ratio, debt-equity ratio and return on assets failed to show the significant relationship with other financial ratios. Financial performance (ROA) of hire-purchase companies of NBFC was 41 per cent depend on their profitability, liquidity, solvency and efficiency ratios. Among the ratios, the profitability ratios namely, net profit ratio and operating profit ratio did the significant influence on the financial performance of hire-purchase companies while the other ratios like current ratio, debt-equity ratio, fixed asset turnover ratio and asset turnover ratio did not a significant influence. In addition, the variation inflation factor (VIF) of all independent variables was around 1. It could be concluded that there was no multi-collinearity problem within the independent variables. Therefore, the regression coefficients possessed the less variance. Then, it inferred that the precision of the results was good.

CHAPTER - VI

FORECASTING THE TOTAL INCOME OF NBFC COMPANIES

6.1 Introduction

Forecasting is the technique that predicts the future on the basis of present and past values. In the section, the researcher predicts the total income for the year 2016-2020 based on the total income of 2001-2015 data.

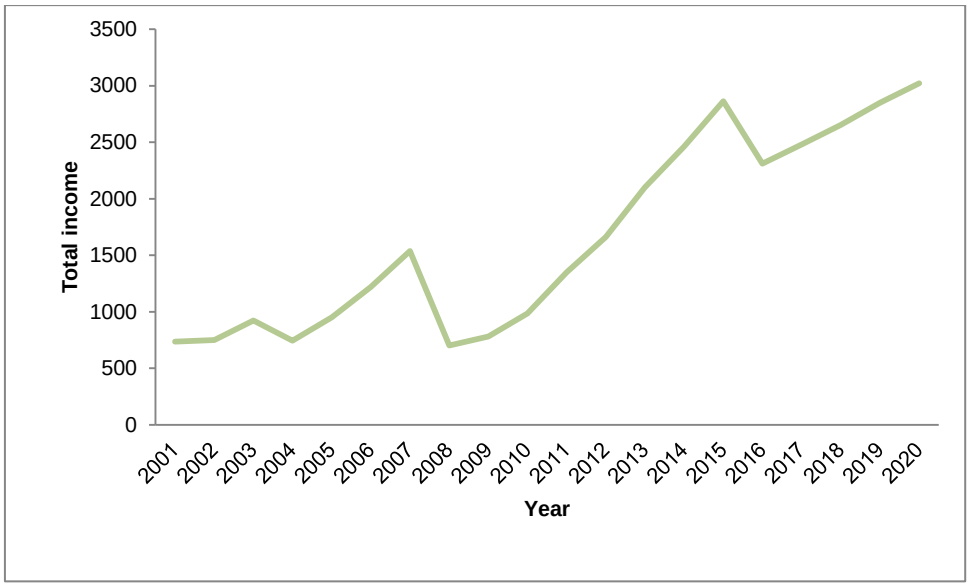
Table 6.1.1: Forecasting the total income of loan companies of Indian NBFC

Year	Total Income
2001	736.162
2002	748.706
2003	924.24
2004	743.286
2005	952.104
2006	1219.339
2007	1538.213
2008	701.73
2009	780.246
2010	984.92
2011	1350.661
2012	1661.216
2013	2100.562
2014	2462.114
2015	2864.041
2016	2309.202*
2017	2479.39*
2018	2652.049*
2019	2849.722*
2020	3021.444*

Source: Calculated by Author*denotes forecasted total income (Crores)

From the table above, it is observed that the total income of loan companies gradually increased for the year 2001-2003. But, there was some drop in the total income for the year 2004. Meanwhile, it recovered for the year 2005 and its values were slowed increased till the year 2007. Again, the total income of loan companies diminished for the year 2008. However, the companies recovered their total income for the year 2008-2015. Based on the 15 years' total income of loan companies, 2016-2020 years total income can be predicted as follows: total income 2309.2 for the year 2016 followed by, 2479.4 for the year 2017, 2652.0 for the year 2018, 2849.7 for the year 2019 and 3021.4 for the year 2020.

Figure 6.1.1: Line chart for the total income of loan companies for the year 2001-2020



Source: Calculated by Author

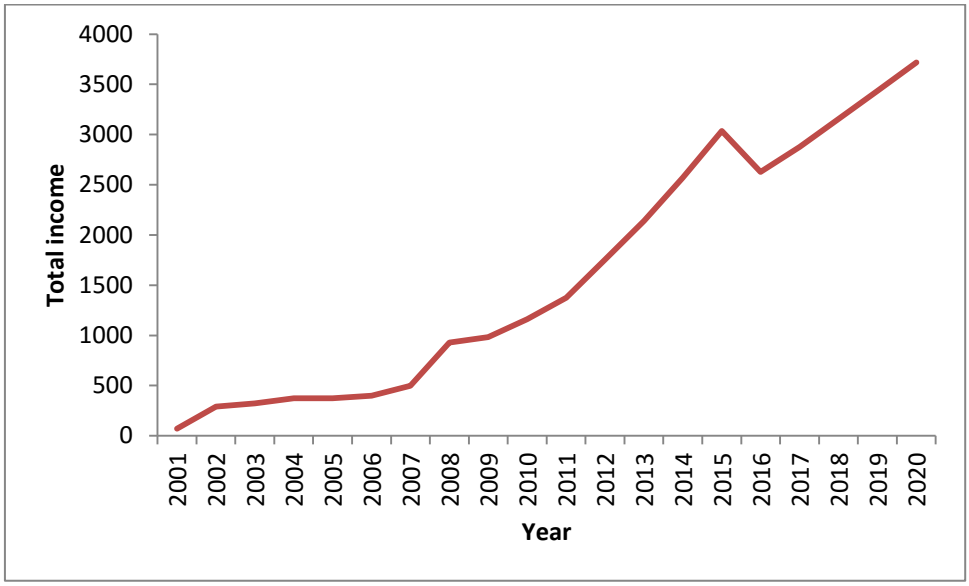
Table 6.1.2: Forecasting the total income of investment companies of Indian NBFC

Year	Total Income
2001	71.56
2002	290.49
2003	322.30
2004	373.70
2005	374.94
2006	398.54
2007	498.25
2008	928.10
2009	981.10
2010	1162.07
2011	1373.33
2012	1753.76
2013	2140.83
2014	2571.39
2015	3034.17
2016	2629.01*
2017	2876.68*
2018	3152.78*
2019	3433.75*
2020	3717.10*

Source: Calculated by Author*denotes forecasted total income (Crores)

Table above shows the total income of investment companies of Indian NBFC. The findings reveal that the total income increased gradually from the year 2001 to 2015. It indicates that the investment companies maintained their total income for the year 2001-2015. As per the 15 years the total income of investment companies' data, 2016-2020 years total income can be predicted as follows: total income 2629.01 for the year 2016 followed by, 2876.7 for the year 2017, 3152.8 for the year 2018, 3433.7 for the year 2019 and 3717.1 for the year 2020.

Figure 6.1.2: Line chart for the total income of investment companies for the year 2001-2020



Source: Calculated by Author

Table 6.1.3:Forecasting the total income of infrastructure finance companies of Indian NBFC

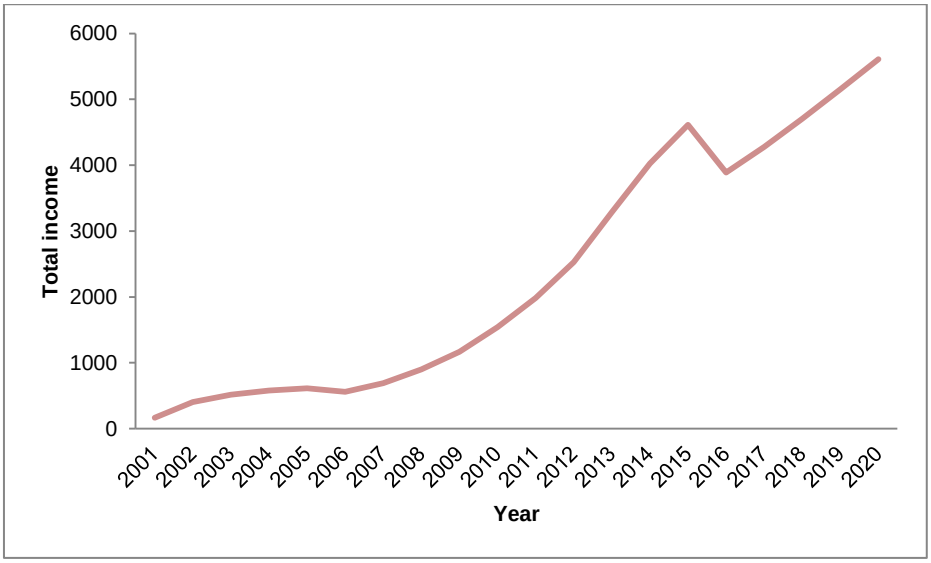
Year	Total Income
2001	163.46
2002	405.33
2003	516.34
2004	576.18
2005	614.63
2006	559.85
2007	692.63
2008	901.36
2009	1168.15
2010	1542.21
2011	1982.54
2012	2529.10
2013	3285.33

2014	4024.07
2015	4614.62
2016	3888.04*
2017	4277.72*
2018	4704.06*
2019	5151.42*
2020	5608.12*

Source: Calculated by Author. *denotes forecasted total income (Crores)

The total income of infrastructure finance companies of Indian NBFC is shown in table 76. From the analysis, it is inferred that the total income increased gradually from the year 2001 to 2015. It indicates that the infrastructure finance companies maintained their total income for the year 2001-2015. On the basis of the 15 years the total income of infrastructure finance companies' data, 2016-2020 years total income can be predicted as follows: total income 3888.04 for the year 2016 followed by, 4277.72 for the year 2017, 4704.1 for the year 2018, 5151.4 for the year 2019 and 5608.1 for the year 2020.

Figure 6.1.3: Line chart for the total income of infrastructure finance companies for the year 2001-2020



Source: Calculated by Author

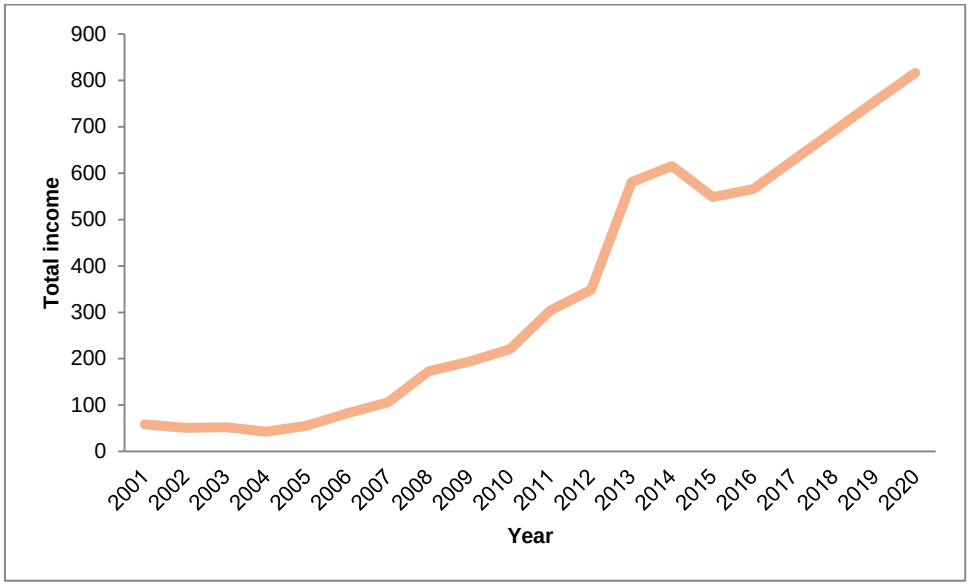
Table 6.1.4: Forecasting the total income of equipment leasing companies of Indian NBFC

Year	Total Income
2001	58.78
2002	51.30
2003	52.41
2004	42.97
2005	55.72
2006	83.00
2007	106.46
2008	173.14
2009	193.82
2010	220.70
2011	304.34
2012	348.64
2013	580.83
2014	615.45
2015	548.55
2016	565.84*
2017	628.07*
2018	691.20*
2019	754.86*
2020	815.72*

Source: Calculated by Author. *denotes forecasted total income (Crores)

Table above presents the total income of equipment leasing companies of Indian NBFC. The findings reveal that there was some zigzag movement in the total income for the year 2001 to 2005. After the period of 2005, the total income slowly increased from the year 2005 to 2015. As per the 15 years the total income of equipment leasing companies' data, 2016-2020 years total income can be predicted as follows: total income 565.8 for the year 2016 followed by, 628.1 for the year 2017, 691.2 for the year 2018, 754.9 for the year 2019 and 815.7 for the year 2020.

Figure 6.1.4: Line chart for the total income of equipment leasing companies for the year 2001-2020



Source: Calculated by Author

Table 6.1.5: Forecasting the total income of hire-purchase companies of Indian NBFC

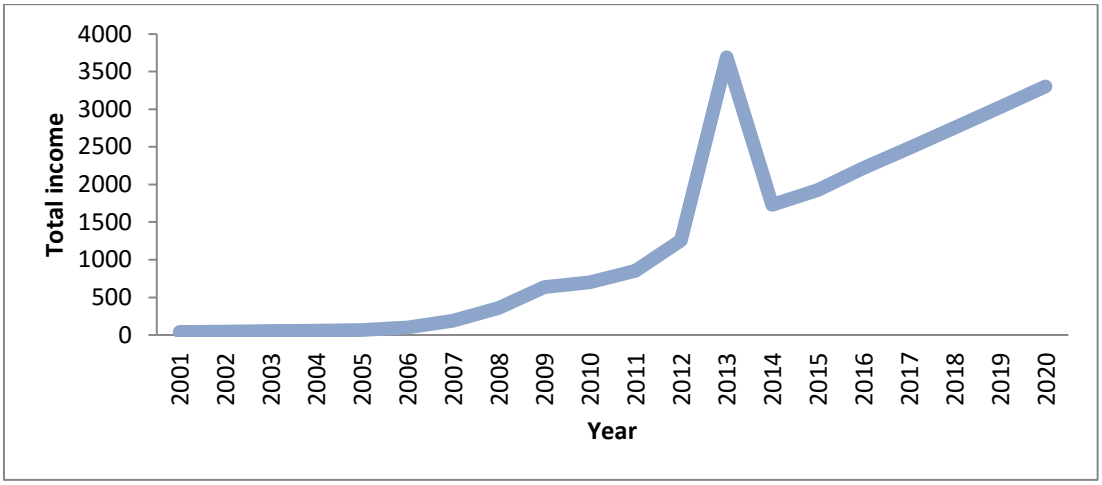
Year	Total Income
2001	39.99
2002	46.72
2003	53.52
2004	59.60
2005	65.48
2006	101.63
2007	190.73
2008	357.80
2009	637.04
2010	700.78
2011	851.19
2012	1256.15
2013	3691.08

2014	1729.40
2015	1925.04
2016	2216.62*
2017	2479.73*
2018	2751.90*
2019	3028.24*
2020	3302.16*

Source: Calculated by Author. *denotes forecasted total income (Crores)

From the table above, it is observed that the total income of hire-purchase companies gradually increased for the year 2001-2015. Therefore, the hire-purchase companies maintained their total income for the year 2001-2015. Based on the 15 years' total income of hire-purchase companies, 2016-2020 years total income can be predicted as follows: total income 2216.6 for the year 2016 followed by, 2479.7 for the year 2017, 2751.9 for the year 2018, 3028.2 for the year 2019 and 3302.2 for the year 2020.

Figure 6.1.5: Line chart for the total income of hire-purchase companies for the year 2001-2020



Source: Calculated by Author

CHAPTER - VII

CONCORDANCE-DISCORDANCE ANALYSIS

7.1 Comparison of financial performance between the classifications of NBFC

Table 7.1.1: Financial comparison for the year 2001

	LC	**IC**	**IFC**	**ELC**	**HPC**	**F-value**	**p-value**
	Mean±SD						
Total liability	6.1±2.6	3.6±2.4	4.2±2.7	2.8±2.2	4.5±1.7	2.7	**0.04***
Equity capital	3.6±1.4	3.1±1.4	3.6±2.2	1.7±0.7	2.4±1.0	3.3	**0.02***
Operating profit	3.8±3.3	2.4±2.1	1.4±3.1	0.7±3.2	2.9±1.4	1.4	0.25
Investments	3.7±2.9	3.3±3.1	1.8±1.7	1.1±2.2	2.1±1.7	1.8	0.16

Source: Calculated by Author. *p<0.05. LC-Loan companies, IC-Investment companies, IFC-Infrastructure finance companies, ELC-Equipment leasing companies and HPC-Hire purchase companies

Table above presents the comparison analysis of financial performance of various NBFCs for the year 2001. The significance value (p-value <0.05) clearly indicated that there was a variation of the total liability and equity capital in the different NBFCs. Further, the mean values elucidated that equipment leasing companies had less total liability and equity capital compared with other companies. However, operating profit and investments did not vary in the different NBFCs.

Table 7.1.2: Financial comparison for the year 2002

	LC	**IC**	**IFC**	**ELC**	**HPC**	**F-value**	**p-value**
	Mean±SD						
Total liability	6.2±2.6	4.5±2.9	4.8±3.2	2.4±2.5	4.5±1.8	2.8	**0.04***
Equity capital	3.6±1.3	3.5±1.9	3.6±2.2	1.7±0.7	2.4±1.0	3.3	**0.02***
Operating profit	3.8±3.6	2.3±3.7	2.8±3.5	0.6±2.9	2.3±2.1	1.1	0.48
Investments	3.9±3.1	3.5±2.5	2.2±1.9	1.3±2.2	2.1±1.7	1.8	0.15

Source: Calculated by Author. *p<0.05. LC-Loan companies, IC-Investment companies, IFC-Infrastructure finance companies, ELC-Equipment leasing companies and HPC-Hire purchase companies

Mean comparison between various NBFCs based on the financial performance is depicted in table 80. The significance value (p-value <0.05) clearly indicated that there was a variation of the total liability and equity capital in the different NBFCs for the year 2002. In addition, equipment leasing companies had less total liability and equity capital compared to other companies for the year 2002. However, operating profit and investments did not vary in the different NBFCs (p>0.05).

Table 7.1.3: Financial comparison for the year 2003

	LC	**IC**	**IFC**	**ELC**	**HPC**	**F-value**	**p-value**
	Mean±SD						
Total liability	6.4±2.6	3.9±3.2	5.1±3.3	2.3±2.7	4.5±1.8	3.0	0.03*
Equity capital	3.6±1.3	3.0±2.3	3.7±2.3	1.7±0.7	2.5±1.1	2.5	0.05*
Operating profit	4.4±2.7	2.9±3.9	3.0±3.5	0.9±2.9	2.5±2.4	1.2	0.32
Investments	4.1±3.0	2.9±2.7	2.8±2.5	1.9±2.2	2.1±1.8	1.0	0.40

Source: Calculated by Author. *p<0.05. LC-Loan companies, IC-Investment companies, IFC-Infrastructure finance companies, ELC-Equipment leasing companies and HPC-Hire purchase companies

Table above shows the comparison analysis of financial performance of various NBFCs for the year 2003. From the analysis, it is concluded that the total liability and equity capital differed on the basis of different NBFCs (p<0.05) for the year 2003. In the year of 2003, equipment leasing companies had low total liability and equity capital compared to other companies. However, operating profit and investments of NBFCs did not show a significant difference.

Table 7.1.4: Financial comparison for the year 2004

	LC	IC	IFC	ELC	HPC	F-value	p-value
	Mean±SD						
Total liability	6.4±2.6	3.9±3.2	5.1±3.4	2.6±2.3	4.7±1.8	2.7	0.04*
Equity capital	3.6±1.3	3.1±2.1	3.7±2.3	1.7±0.7	2.6±1.1	2.6	0.05*
Operating profit	4.3±2.3	1.9±3.5	3.2±3.3	0.6±2.8	2.1±2.0	2.0	0.11
Investments	4.1±3.0	2.8±2.4	2.7±2.4	1.2±2.6	2.0±1.8	1.7	0.12

Source: Calculated by Author. *p<0.05. LC-Loan companies, IC-Investment companies, IFC-Infrastructure finance companies, ELC-Equipment leasing companies and HPC-Hire purchase companies

The above table clearly depicts that the total liability and equity capital ($p<0.05$) were differed in the various NBFCs for the year 2004. In addition, equipment leasing companies possessed less total liability and equity capital in the year 2004. Since, it had the low mean score compared to other companies. But, there was no deviation between the NBFCs on the basis of operating profit and investments.

Table 7.1.5: Financial comparison for the year 2005

	LC	IC	IFC	ELC	HPC	F-value	p-value
	Mean±SD						
Total liability	6.7±2.5	3.9±3.6	5.5±3.2	2.7±2.5	4.8±1.8	2.9	0.03*
Equity capital	3.8±1.3	2.9±2.2	3.7±2.3	1.7±0.7	2.7±1.2	2.7	0.04*
Operating profit	4.1±2.6	4.2±3.2	3.1±3.4	0.6±2.9	2.4±2.3	2.0	0.11
Investments	4.2±2.9	2.8±2.5	3.3±2.7	1.3±2.4	2.2±1.6	1.6	0.18

Source: Calculated by Author *p<0.05. LC-Loan companies, IC-Investment companies, IFC-Infrastructure finance companies, ELC-Equipment leasing companies and HPC-Hire purchase companies

Mean comparison between various NBFCs based on the financial performance is depicted in table above. The significance value (p-value <0.05) clearly indicated that there was a variation of the total liability and equity capital in the different NBFCs for the year 2005. Also, equipment leasing companies had less total liability

and equity capital compared to other companies for the year 2005. In the year of 2005, NBFCs did not vary on the basis of operating profit and investments (p>0.05).

Table 7.1.6: Financial comparison for the year 2006

	LC	IC	IFC	ELC	HPC	F-value	p-value
	Mean±SD						
Total liability	6.9±2.6	5.2±2.7	5.2±3.5	2.9±2.7	4.6±2.2	2.5	0.05*
Equity capital	3.8±1.3	3.7±1.7	3.6±2.1	1.7±0.7	2.8±1.1	3.2	0.02*
Operating profit	4.4±2.6	2.6±2.7	3.2±3.3	1.6±2.7	3.3±1.8	1.2	0.31
Investments	4.3±2.8	4.4±2.1	3.2±2.7	1.3±2.5	2.1±1.5	2.7	0.04*

Source: Calculated by Author. *p<0.05. LC-Loan companies, IC-Investment companies, IFC-Infrastructure finance companies, ELC-Equipment leasing companies and HPC-Hire purchase companies

Table above shows the comparison analysis of financial performance of various NBFCs for the year 2006. The statistical significance (p-value) values indicated that the total liability, equity capital and investments differed on the basis of different NBFCs (p<0.05) for the year 2006. In the year of 2003, equipment leasing companies had low total liability, equity capital and investments compared to other companies. However, operating profit of NBFCs did not show a significant difference.

Table 7.1.7: Financial comparison for the year 2007

	LC	IC	IFC	ELC	HPC	F-value	p-value
	Mean±SD						
Total liability	7.1±2.6	5.5±2.7	5.9±3.3	3.2±2.9	4.9±2.6	2.4	0.06
Equity capital	3.9±1.3	3.9±1.7	3.5±2.3	1.8±0.8	2.9±1.3	3.2	0.02*
Operating profit	4.7±2.9	2.5±3.2	3.3±2.9	3.2±2.3	2.9±2.3	0.8	0.50
Investments	3.9±2.9	4.9±2.0	3.8±2.6	1.5±2.7	2.3±2.0	2.5	0.06

Source: Calculated by Author. *p<0.05. LC-Loan companies, IC-Investment companies, IFC-Infrastructure finance companies, ELC-Equipment leasing companies and HPC-Hire purchase companies

Table above shows the comparison analysis of financial performance of various NBFCs for the year 2007. The significance value (p-value <0.05) clearly revealed that there was a variation of the equity capital in the different NBFCs in the year of 2007. Further, the mean values elucidated that equipment leasing companies had less equity capital compared with other companies. However, total liability operating profit and investments did not vary in the different NBFCs.

Table 7.1.8: Financial comparison for the year 2008

	LC	**IC**	**IFC**	**ELC**	**HPC**	**F-value**	**p-value**
	Mean±SD						
Total liability	7.3±2.4	5.9±2.9	6.5±3.2	3.8±2.9	5.0±2.8	2.1	0.10
Equity capital	4.0±1.3	3.9±1.7	3.9±2.1	1.9±0.8	3.0±1.4	3.5	0.01**
Operating profit	5.0±2.9	3.3±3.0	3.9±2.9	1.8±2.9	3.1±2.8	1.5	0.22
Investments	3.9±3.2	5.4±2.3	4.3±2.7	2.4±2.3	2.0±1.8	2.6	0.05*

Source: Calculated by Author. *p<0.05; **p<0.01. LC-Loan companies, IC-Investment companies, IFC-Infrastructure finance companies, ELC-Equipment leasing companies and HPC-Hire purchase companies

Comparison analysis between different NBFCs based on the financial performance is presented in table above. As per the significance values (p-value <0.05), equity capital and investments differed in the various NBFCs in the year of 2008. However, there was no variation in the total liability operating profit among the different NBFCs (p-value >0.05).

Table 7.1.9: Financial comparison for the year 2009

	LC	IC	IFC	ELC	HPC	F-value	p-value
	Mean±SD						
Total liability	7.4±2.5	6.1±3.2	6.6±3.2	3.8±2.8	5.7±2.8	2.1	0.09
Equity capital	4.0±1.3	4.0±1.7	3.9±2.1	2.1±1.1	3.2±1.3	2.9	0.03*
Operating profit	5.6±2.2	3.8±3.6	3.8±3.3	1.9±3.7	4.2±2.6	1.4	0.25
Investments	4.3±3.2	4.8±3.4	4.3±2.8	1.9±2.4	2.3±2.4	1.9	0.13

Source: Calculated by Author. *p<0.05. LC-Loan companies, IC-Investment companies, IFC-Infrastructure finance companies, ELC-Equipment leasing companies and HPC-Hire purchase companies

The above table reveals that the equity capital (p<0.05) was differed in the various NBFCs for the year 2009. Further, equipment leasing companies possessed less equity capital in the year 2009. Since, it had the low mean score compared to other companies. But, there was no deviation between the NBFCs on the basis of total liability, operating profit and investments.

Table 7.1.10: Financial comparison for the year 2010

	LC	IC	IFC	ELC	HPC	F-value	p-value
	Mean±SD						
Total liability	7.6±2.5	6.3±3.2	6.8±3.2	4.1±2.8	5.4±3.2	2.0	0.11
Equity capital	4.1±1.3	4.1±1.8	3.9±2.2	2.1±1.0	3.2±1.3	2.8	0.03*
Operating profit	5.9±1.9	3.4±3.1	4.0±3.0	2.1±3.3	3.4±2.6	2.0	0.11
Investments	5.0±2.8	5.0±3.4	4.4±3.1	2.1±2.3	3.4±2.6	1.8	0.15

Source: Calculated by Author. *p<0.05. LC-Loan companies, IC-Investment companies, IFC-Infrastructure finance companies, ELC-Equipment leasing companies and HPC-Hire purchase companies

Mean comparison between various NBFCs based on the financial performance for the year 2010 is depicted in table above. The significance value (p-value <0.05) clearly indicated that equity capital differed in the different NBFCs for the year 2010. Also, equipment leasing companies had low equity capital compared to other

companies for the year 2010. In the year of 2010, NBFCs did not vary on the basis of total liability, operating profit and investments (p>0.05).

Table 7.1.11: Financial comparison for the year 2011

	LC	IC	IFC	ELC	HPC	F-value	p-value
	Mean±SD						
Total liability	7.7±2.7	6.3±3.4	6.8±3.1	4.4±2.7	6.3±3.0	1.6	0.19
Equity capital	4.2±1.2	4.1±1.8	3.9±2.2	2.2±1.1	3.4±1.4	2.8	0.04*
Operating profit	5.4±3.0	4.0±2.7	3.9±3.5	2.1±3.1	3.3±3.6	1.4	0.24
Investments	5.2±2.7	5.2±3.3	3.9±3.3	3.1±1.8	2.9±2.9	1.4	0.26

Source: Calculated by Author. *p<0.05. LC-Loan companies, IC-Investment companies, IFC-Infrastructure finance companies, ELC-Equipment leasing companies and HPC-Hire purchase companies

Table above presents the comparison analysis of financial performance of various NBFCs for the year 2011. The significance value (p-value <0.05) clearly revealed that there was a variation of the equity capital in the different NBFCs in the year of 2011. In addition, the mean values indicated that equipment leasing companies had less equity capital compared with other companies. However, total liability, operating profit and investments did not vary in the different NBFCs.

Table 7.1.12: Financial comparison for the year 2012

	LC	IC	IFC	ELC	HPC	F-value	p-value
	Mean±SD						
Total liability	7.8±2.7	6.2±3.5	6.9±3.2	4.9±2.5	5.6±3.6	1.2	0.31
Equity capital	4.2±1.2	4.1±1.9	4.0±2.2	2.4±1.1	3.5±1.5	1.9	0.11
Operating profit	5.6±2.9	3.6±3.8	3.7±3.5	2.9±2.3	4.1±3.2	1.0	0.41
Investments	4.9±3.0	6.3±2.4	4.0±3.3	3.2±1.5	3.5±2.6	1.9	0.12

Source: Calculated by Author. LC-Loan companies, IC-Investment companies, IFC-Infrastructure finance companies, ELC-Equipment leasing companies and HPC-Hire purchase companies

Table above interprets that the difference among the various NBFCs did not attain the statistical significance. Since, all the p-values were above 5 percent level of significance. Therefore, all kinds of NBFCs had the almost similar level of total liability, equity capital, operating profit and investments in the year of 2012.

Table 7.1.13: Financial comparison for the year 2013

	LC	**IC**	**IFC**	**ELC**	**HPC**	**F-value**	**p-value**
	Mean±SD						
Total liability	8.0±2.7	6.3±3.6	6.9±3.3	5.2±2.5	6.3±2.9	1.2	0.32
Equity capital	4.3±1.4	4.1±1.9	4.0±2.2	2.6±1.2	3.9±1.3	1.7	0.17
Operating profit	6.0±3.1	3.1±4.2	3.9±3.6	2.7±2.9	4.3±3.2	1.3	0.30
Investments	5.1±2.9	6.4±2.3	4.2±3.3	3.4±1.7	3.7±2.6	1.9	0.13

Source: Calculated by Author. LC-Loan companies, IC-Investment companies, IFC-Infrastructure finance companies, ELC-Equipment leasing companies and HPC-Hire purchase companies

From the above table, it can be inferred that there was no variation of total liability, equity capital, operating profit and investments between different NBFCs. Hence, all NBFCs had the similar level of total liability, equity capital, operating profit and investments in the year of 2013.

Table 7.1.14: Financial comparison for the year 2014

	LC	**IC**	**IFC**	**ELC**	**HPC**	**F-value**	**p-value**
	Mean±SD						
Total liability	8.2±2.8	6.3±3.6	7.0±3.4	5.1±2.5	6.3±2.9	1.3	0.28
Equity capital	4.3±1.9	4.1±1.9	4.2±2.1	2.6±1.2	3.8±1.3	1.8	0.14
Operating profit	5.9±3.0	3.8±4.1	4.6±3.4	2.8±2.7	3.7±3.6	1.2	0.33
Investments	5.2±2.9	6.6±2.1	4.4±3.5	3.6±1.8	3.5±2.6	2.0	0.11

Source: Calculated by Author. LC-Loan companies, IC-Investment companies, IFC-Infrastructure finance companies, ELC-Equipment leasing companies and HPC-Hire purchase companies

Table above specifies that the difference among the various NBFCs did not attain the statistical significance. Since, all the p-values were above 5 percent level of significance. Therefore, all kinds of NBFCs had the almost similar level of total liability, equity capital, operating profit and investments in the year of 2014.

Table 7.1.15: Financial comparison for the year 2015

	LC	**IC**	**IFC**	**ELC**	**HPC**	**F-value**	**p-value**
	Mean±SD						
Total liability	8.3±2.7	6.4±3.6	7.0±3.4	5.2±2.5	6.4±3.0	1.3	0.27
Equity capital	4.3±1.4	4.2±1.9	4.2±2.1	2.7±1.3	3.9±1.3	1.6	0.18
Operating profit	6.1±2.9	3.4±4.0	4.8±3.7	2.9±2.6	4.1±3.2	1.3	0.27
Investments	5.5±2.7	6.6±2.1	5.1±3.3	3.7±1.8	3.4±2.6	2.4	0.07

Source: Calculated by Author. LC-Loan companies, IC-Investment companies, IFC-Infrastructure finance companies, ELC-Equipment leasing companies and HPC-Hire purchase companies

From the table above, it can be inferred that there was no variation of total liability, equity capital, operating profit and investments between different NBFCs. Hence, all NBFCs had the similar level of total liability, equity capital, operating profit and investments in the year of 2015.

CHAPTER - VIII

SUMMARY AND CONCLUSION

8.1 Financial performance of NBFC:

This section summarizes all the statistical findings. The descriptive statistics reveal that the financial performance of NBFCs was good on the basis of current ratio. When In the case the loan companies, return on assets was a positive relationship with profitability and efficiency ratios such as net profit ratio, operating profit ratio, fixed asset turnover ratio and assets turnover ratio. Meanwhile, fixed asset turnover ratio and asset turnover ratio could regulate the financial performance of loan companies.

Likewise, net profit ratio was a positive relationship with return on assets in the investment companies of Indian NBFCS and it has caused the good financial performance of the companies. In the infrastructure finance companies, net profit ratio has some positive relation with operating profit ratio, and return on assets. In addition, the performance of infrastructure finance companies of NBFC depended on the financial ratios such as net profit ratio, fixed asset turnover ratio and asset turnover ratio etc.

Similarly, the performance of equipment leasing companies depended on the operating profit ratio and asset turnover ratio while the performance of hire-purchase companies of NBFC only influenced by the profitability ratios, such as net profit ratio and operating profit ratio.

8.2 Efficiency of NBFCs:

In the year of 2001, investment and equipment leasing companies possessed the good technical efficiency, while loan, infrastructure finance and hire-purchase companies of NBFCs were inefficient with respect to technical. However, loan,

investment and infrastructure finance companies had the allocative efficiency. For the year 2002 and 2003, loan and equipment leasing companies are noticed to be good technical efficient companies of NBFC. In addition, loan and investment companies had the good allocative efficiency in the year of 2002 and 2003. But, in the year of 2004 and 2005, almost all kinds of NBFCs belonged to good technical and allocative efficient companies. Loan, equipment leasing and hire-purchase companies were identified as good technical efficient companies for the year 2006. Analogously, loan and equipment leasing companies of NBFC possessed good technical and allocative efficiency in the year of 2007. Three companies were noticed as good allocative efficient companies namely, investment companies, infrastructure finance companies and equipment leasing companies for the year 2008. However, almost all the NBFC companies attained as good technical efficient companies from the year 2009 to 2012. Loan companies, investment companies and hire-purchase companies belonged to good allocative efficient companies for the year 2009. In the year of 2013, only loan, equipment leasing and hire-purchase companies of NBFC had the good technical efficiency while investment, infrastructure finance and loan companies had the good allocative efficiency. Similarly, investment, infrastructure finance and equipment leasing companies had the good technical efficiency for the year 2014. The loan, investment and infrastructure companies were noticed as good allocative efficient companies for the year 2014 and 2015. In the year of 2015, rest of loan companies of NBFC attained as good technical companies.

The technical efficiency score of various NBFC calculated for the years 2001 to 2015, wherein 2015 had the efficiency score as 1.00. However, the loan companies of NBFC did not attain the well technical efficiency. For the year 2014, the investment, infrastructure finance and equipment leasing companies retained good

technical efficiency. Investment, equipment and hire- purchase companies possessed good technical efficiency for the year 2013. For the years 2012, 2011, 2010, 2009 and 2005 infrastructure companies alone did not attain the well technical efficiency. Investment, infrastructure finance and hire-purchase companies did not attain the good technical efficiency for the years 2008, 2007, 2003 and 2002. Investment and infrastructure finance companies did not attain the good technical efficiency for the year 2006.Investment companies did not attain the good technical efficiency for the year 2004. Investment and equipment leasing companies possessed the good technical efficiency for the year 2001 on the basis of the highest efficiency score while loan, infrastructure finance and hire-purchase companies did not attain the good technical efficiency for the year 2001.

8.3 Forecasting the total incomes of NBFCs:

The total income of loan companies of Indian NBFC may be 2309.2 for the year 2016 followed by, 2479.4 for the year 2017, 2652.0 for the year 2018, 2849.7 for the year 2019 and 3021.4 for the year 2020. Likewise, the total income of investment companies may be 2629.01 for the year 2016 followed by, 2876.7 for the year 2017, 3152.8 for the year 2018, 3433.7 for the year 2019 and 3717.1 for the year 2020.

The total income of infrastructure finance companies of NBFC may be 3888.04 for the year 2016 followed by, 4277.72 for the year 2017, 4704.1 for the year 2018, 5151.4 for the year 2019 and 5608.1 for the year 2020. Equipment leasing companies' total income may be 565.8 for the year 2016 followed by, 628.1 for the year 2017, 691.2 for the year 2018, 754.9 for the year 2019 and 815.7 for the year 2020. Finally, the total income of hire-purchase companies may be 2216.6 for the year 2016 followed by, 2479.7 for the year 2017, 2751.9 for the year 2018, 3028.2 for the year 2019 and 3302.2 for the year 2020.

8.4 Financial comparison between the NBFCs:

The various NBFCs were compared on the basis of total liability, equity capital, operating profit and investments. In the year of 2001-2005, operating profit and investments of various NBFCs did not vary. But, total liability and equity capital differed across various NBFCs Equipment leasing companies of NBFCs possessed less total liability and equity capital when compared with other companies for the year 2001-2005. Total liability, equity capital and investments were varied across the various NBFCs for the year 2006. But, they were not statistically differed in the various NBFCs in the year of 2007-2011. From the year of 2012 to 2015, all types of NBFC possessed at most similar level of total liability, equity capital, operating profit and investments.

Correlation statistical test was applied to analyse the significant relationship between NPR, OPM CR, DER, FATR, ATR and ROA of loan companies and it was partially accepted. The result of regression statistical test showed that there was no significant impact of NPR, OPM CR, DER, FATR, and ATR on ROA for loan companies. Then, there is no significant relationship between NPR, OPM CR, DER, FATR, ATR and ROA of investment companies of NBFCs according to the result of correlation statistical test. Further it was found that there is no significant impact of NPR, OPM CR, DER, FATR, and ATR on ROA for investment companies of NBFCs on the results of regression statistical test.

8.5 Summary of Findings

It is observed from the analysis that the loan companies were found to be inefficient across the NBFC categories consecutively from 2013 onwards while all the other categories were found to be efficient during this time period. It can be attributed

to an extent to the recessionary phase of overall economy which resulted in increased non-performing assets and slow down in credit growth.

In case of infrastructure finance companies, the segment is found to be inefficient from 2001 to 2012. It is reported that the segment had been experiencing severe delay in completion of the projects especially due to the hold-up in the clearances from the respective governments.

Investment and hire purchase companies were found to be inefficient from 2002 to 2008. During this period, though overall economic performance was reported to be better especially due to the boom in the service sector, the demand from the industrial sector was lagging behind and the segment was found to be flooded with higher level of idle liquidity.

From the regression analysis, it is observed that the financial performances of NBFCs are significantly influenced by the asset turnover ratio and profitability. In case of loan companies, asset turnover ratio was found to be a significant component, affecting the performance of firms in this category, while for investment companies, profitability ratio was observed to have significant impact. The performance of infrastructure companies are found to be affected by the asset turnover ratio, fixed asset turnover ratio and profitability ratio and in the case of hire purchase and equipment leasing companies, profitability ratio was found to be a significant factor.

8.6. Recommendations

While the acceptance of deposits for the NBFC's is most significantly lesser than that of the banking sector, the vast network of NBFC's can enable for the mobilisation deposit activities. In this scenario, under the guidance of suitable regulation, NBFC's can assist in the corporate sector. Even though the NBFC sector has taken advantage

of a slew of regulations in the past, their role is still strong in the Indian economy. For this, the following recommendations have been made.

- The performance of inefficient NBFCs can be improved either by reducing total liability and equity capital or by increasing operating profit and investment, because idle fund lay with NBFCs are costing to their balance sheet.
- Loan companies need to increase their asset turnover ratio and boost their non-performing asset management.
- Investment companies need to focus on increasing their profitability ratio and fund management.
- In order to improve the performance of infrastructure companies, asset turnover ratio, fixed asset turnover ratio and profitability ratio needs to be increased. At the same time, focus should also be made on eliminating the policy paralysis from the government which has a significant negative impact on the infrastructure projects.
- In case of hire purchase and equipment leasing companies, the focus should be given on enhancing profitability ratio and policy level measures should be taken by the government to increase the demand from the industrial sector.
- Regulation that is both effective and efficient is most required especially for large investors in the sector. But this very existence of large scale investors has made the NBFC sector more notorious and susceptible to fraudulent activity than the banking sector. However, it has to be stated that NBFC's form an integral part of the Indian economy.
- To further streamline the financial performance of NBFC's , RBI can set up another wing for the regulation of NBFC's such as Non-Banking supervision.

This division can further be subdivided under the non-banking supervision. Regular inspections must be carried out by these divisions. This can be carried out in the form of off-site surveillance, market surveillance, on-site inspection, portfolio examination, and interaction with other departments.

- The role of NBFCs definitely plays a very important role in the economy, so much so that they have even supplemented the role the banks play in the economy. The recommendation here is that more of an association is required between NBFCs and banks that need to be built up by the RBI.
- NBFCs even operate in remote areas that do not have access to banks. In such situations the RBI must make provisions to protect and sustain the operations of the NBFCs.
- Both banks and NBFCs must be allowed in factoring services for the betterment of the economy.
- NBFCs should also be allowed in cheque clearing activities, credit cards and forex activities to enable for sectors such as purchase, loan and investment activities to gain more ground.

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