CHAPTER - 8

SUMMARY, CONCLUSIONS, AND SUGGESTIONS

Chapter Outline:

Chapter – 8

SUMMARY, CONCLUSIONS, AND SUGGESTIONS

In this chapter a chapter-wise summary and an overall conclusion of the study are given along with limitations of the study, further scope of research, and suggestions of the study.

8.1 Summary of Chapter 1 (Introduction)

In this chapter, the theoretical concepts relating to performance assessment and techniques of performance assessment have been discussed. Apart from it, concept**,** roles, and types of Non-Banking Financial Companies (NBFCs) have also been stated in this chapter. Finally, research problem, objectives of the study, importance, scope, hypotheses, and chapter plan of the study have been stated in the penultimate section of this chapter.

The summary of this chapter are as follows:

1. Performance assessment is the application of a suitable technique to measure the actual accomplishment against any preset standard, based on specific knowledge and skills and depending upon the pattern and nature of a particular task for which an organization exists. The basic techniques of financial assessment include vertical and horizontal analysis, ratio analysis, and cash flow analysis.
2. A NBFC is a company dealing in loans and advances, acquisition of securities issued by the Government or local authority, hire-purchase, leasing, insurance services, and chit fund business but excludes the agricultural activity, industrial activity, trading of any goods, and transfer of immovable property. The NBFCs can contribute through their financing schemes in the country's

urban economic development. In fact, the activity of these financial institutions involves diversity so they can establish themselves to be a part of development of a country by suitable regulatory measures.

3. NBFCs can be classified into different categories depending on the type of activities they perform, such as Hire Purchase Company (HPC), Investment Company (IC), Loan Company (LC), Nidhi Company (NC)/Mutual Benefit Financial Company (MBFC), Equipment Leasing Company (ELC), Chit Fund Company (CFC) / Miscellaneous Non-Banking Company (MNBC), and Residuary Non-Banking Company (RNBC). From December 6, 2006, the NBFCs registered with the RBI have been reclassified as Asset Finance Company (AFC), Investment Company (IC), and Loan Company (LC). AFCs are primarily engaged in the financing of capital assets. ICs are primarily engaged in the acquisition of new and existing securities and financing out of the generated fund associated with the same. LCs are engaged in the operation of financing of different short term and long term loans but exclude the activities of AFCs.
4. The present study is of extreme importance to assess the performance of NBFCs. This is because such an assessment will bring out the current position of the selected NBFCs individually; inter alia, the overall performance of this sector as a whole. The outcome of the study will, therefore, have immense policy implications and will surely guide the regulators to come up with appropriate policies to ensure growth and survival of this segment of financial system.
5. After reclassification of NBFCs registered with the RBI from the year 2006, the RBI published only the list of AFCs and ICs. Unfortunately, adequate data

are not available relating to the list of functioning of LC and even if they are available, they are not reliable. This is why LC has been kept outside the purview of our study. Thus, the scope of the present study finally encompasses two categories of NBFCs, namely, Asset Finance Companies and Investment Companies.

6. The primary objective of this study is to assess the performance of selected NBFCs in India. To attain this primary objective, the secondary objectives to be achieved are assessment of the structure and estimating growth of liabilities, assets, financial indicators measured by ratios, and finally, comparative analysis of each category of NBFCs (i.e., category-wise and aggregative).
7. To attain the objectives of the study, the following testable null hypotheses have been formulated:
    - H_O (1): There has been no significant growth of the performance parameters under consideration during the period of study.
    - H_O (2): There is no significant difference in the average financial performance between the selected investment companies in the aggregate and asset finance companies in the aggregate.
    - H_O (3): There have been no significant differences in the average performances with respect to selected performance indicators among the selected companies under each category of NBFCs.
8. The framework of the study has been designed in the following way:
    - Introduction
    - Literature Review
    - Research Methodology

- Structure and Growth of Liabilities of the NBFCs (Aggregative and Category-wise)
- Structure and Growth of Assets of the NBFCs (Aggregative and Category-wise)
- Financial Performance of each Category of NBFCs - A Comparative Analysis
- Summary, Conclusion, and Suggestions.

8.2 Summary of Chapter 2 (Literature Review)

The existing Indian and Foreign literatures on the performance of NBFCs that are available from various sources are reviewed in this chapter and on the basis of that, following research gaps have been identified.

1. Studies on NBFCs are found to be carried out on the concepts, principal business, regulations, laws of registration, security measures, nature of activities, schemes including gold loan schemes, relationship with financial intermediaries, advisory board, new reforms, and fair practice code in the Indian context.
2. Some studies have been carried out on financial performance of some selected categories of NBFCs, such as investment companies, leasing companies, and vehicle financing as per old classifications based on secondary data as well as primary data, while other studies are carried out in the area of management of receivables, customer relationship management, and risk management of NBFCs based on primary data.
3. Few studies have been carried out on the nature of various deposits, public deposit, borrowings from bank, credit management, and financial instruments,

growth and development of NBFCs, and ratio analysis of financial indicators of selected NBFCs in India.

4. Apart from the above literatures, other studies are found to be carried out with respect to comparison of NBFCs with banks in India, SWOT analysis of NBFCs with banks in India, customer satisfaction of NBFCs based on primary data, computation of taxable income of NBFCs based on IT Act, and opportunities on investment in NBFCs from the investor's point of view.
5. Finally, some studies are carried out relating to financial performance of the NBFCs in the countries like Kenya, Pakistan, Malaysia, UAE, Afghanistan, Somalia, the Eastern and South African countries, Columbia, Netherlands, UK, USA, and Bangladesh.

From the review of literature as stated above, the following gaps have been identified:

Majority of the studies have been carried out in the context of various regulatory norms and strategies adopted by NBFCs which are theoretical in nature. Few studies were empirical in nature based on analyzing the financial performance of NBFCs on some selected category basis (as per old classification) with respect to selected companies/customers and various deposit schemes in India using primary data as well as secondary data with short time periods. Very few studies focused on these two categories of NBFCs after re-classification and therefore, we hardly get any idea about the relative performance of these two categories of the NBFCs at the aggregative and individual company levels during the post reclassification period.

So, the present study may be considered as a first time attempt to assess the financial performance of selected NBFCs at aggregative level as well as at the individual company level under the new categories of classification by the RBI in India.

8.3 Summary of Chapter 3 (Research Methodology)

On the basis of availability of data, 18 NBFCs (5 ICs and 13 AFCs) have been selected that are registered with RBI as on 30th November, 2015 which form the sample size of our study. These categories of companies are mutually exclusive in nature. The data have been collected mainly from secondary sources. The study has been carried out for a span of nine years, i.e., from the financial year 2006-07 to the financial year 2014-15. For our data analysis, the followings tools and techniques have been purposely used.

1. To calculate the trend growth rate of selected performance indicators (aggregative and company-wise), semi-log regression model has been applied in the study since it gives the growth rate directly at a point of time.
2. Based on literature review and considering the nature of the NBFCs, the ratios that are identified for analysis of financial performance of the NBFCs at aggregative and at the individual company levels are ROA, ROCE, ROE, DE Ratio, NPR, and CR.
3. Since the sample size is less than 30, we have employed Fisher's t Test to test the difference of mean of selected performance indicators between selected IC (aggregative) and selected AFC (aggregative).
4. To determine the differences in selected performance indicators among the selected companies under each category of NBFCs, we have applied the technique of one -way ANOVA, i.e., F test.
5. We have carried out factor analysis (using the Principal Component Method) for selected profitability ratios in order to identify the most important ratio that drives the aggregate profitability performance of the selected companies under study.

6. The technique of Data Envelopment Analysis (DEA) has been applied in order to measure the efficiency of the selected ICs and AFCs according to their physical performances. In this respect, the PCA method of factor analysis has also been used for selection of inputs and forming the new inputs to make DEA analysis more effective. In this DEA, it also indicates how virtually the inefficient DMUs will become efficient under the given input and output combinations through benchmark and slack analysis.
7. In our study, we have carried out a cross tabulation analysis to find the relationship (if any) between the selected ICs and AFCs and between their efficiency scores as derived by DEA during the period under study.
8. Stochastic Frontier Analysis (SFA) has been used to determine the factors of efficiency and inefficiency as a whole under the two selected categories of NBFCs and also to determine the overall efficiency level and the percentage change in the volume of inputs or in the output or in both of them under the given input and output combinations so as to make the companies' performances efficient. It also captures the effect of external random factors on efficiency or inefficiency levels of the DMUs.

8.4 Summary of Chapter 4 (NBFCs: A Historical Analysis)

In this chapter, evaluation**,** registration, resources, policy developments, regulatory measures, etc. of Non-Banking Financial Companies (NBFCs) have been discussed.

The summary of this chapter are as follows:

1. The inception of NBFCs in India started in early 1980s against the backdrop of a highly regulated banking sector. Minimum entry barriers coupled with simple and easy procedure of financing led to the formation of a host of NBFCs in the country. However, in many cases inefficient management and

poor operational activities resulted in problems arising out of adverse portfolio selection, imprudent operations, inability to manage risk both in respect of asset and liability perspective.

2. As per Section 45IA of the RBI Act, 1934, it is mandatory that every NBFCs primarily operating in India should be registered with RBI. After getting registration they can commence or carry on any business which can be permissible under the prescribed activities of non-banking financial institutions. However, some of the institutions that are exempted from registration with RBI are Housing Finance Companies, Merchant Banking Companies, Venture Capital Fund Companies, Nidhi Companies, Insurance companies, Chit Fund Companies, etc.
3. The main source of resources of the NBFCS are generated from approved schemes of deposits (regulated and exempted), and net owned funds. According to Section 45IA of the RBI Act, 1934, it is mandatory that every NBFCs primarily operating in India should be registered with RBI.
4. Various committees, namely, Bhabatosh Datta study group (1971), Chakravarty Committee (1985), James Raj study Group (1975), Narasimham Committee on Financial systems (1991), Vaghul Committee (1987), and Shah Committee (1992) as appointed by the Government of India, have recommended various guidelines on money market operation, entry norms, schemes of public deposit, acceptance of deposits, prudential norms, credit rating, supervisory, regulative framework, scrutiny mechanism, and submission of return in respect of the performance of NBFCs. On the basis of the recommendations by the different committees as stated above, different regulatory measures with respect to corporate governance measures, interest

rate, secondary market transactions, funds monitoring, issuing guidelines, compliance of Telecom Regulatory Authority of India (TRAI), and compliances under Prevention of Money Laundering Act (PMLA Act), 2002, have been implemented to develop a mechanism of investors and borrowers protection and involvement under the financial services of NBFCs.

5. RBI has issued different regulatory measures (mandatory) to provide an effective supervision on Asset-Liability Management (ALM) and Risk Management System (RMS) of NBFCs. These measures include guidelines on certificate of registration, maintenance of liquid assets, creation of reserve fund, ceiling on quantum of public deposits, period of deposits, ceiling of deposit interest rate, advertisement style for acceptance of deposits, obligation of submission of returns, Capital to Risk Assets Ratio (CRAR), restrictive norms, credit and investment concentration norms, reporting system, income recognition, NPA, compliance of accounting standards, accounting for investments, asset classification, disclosure requirements, protection of depositors' interest, risk weights, and credit conversion factors of NBFCs.

   All the NBFCs should follow and publish a fair practice code relating to the operational activities and the same should be published in the website of the company.

6. From the year 1980s, NBFCs have registered a significant growth over the years. In 1990s, the markets of NBFCs have seen a potential growth in respect to CAGR in comparison to banks and a good number of NBFCs cropped up. But in the year 1996, due to the failure of big NBFCs, the RBI tightened the regulatory structure and supervision of the NBFCs. In India, NBFCs have

enjoyed an advantage over the conventional banking system in the semi-urban and rural financial markets in India.

8.5 Summary of Chapter 5 (Structure and Growth of Liabilities of the NBFCs: Aggregative and Category-wise)

In this chapter, structure and growth of 'liabilities' of the selected investment companies and asset finance companies have been analyzed at the aggregate level as well as at the individual company levels.

Structure and Growth of Liabilities of Investment Companies (Aggregative and Company-wise)

1. Analysis of the overall structure of 'liabilities' of selected investment companies (aggregate) reveals that the main components are long term loans and short term loans. Initially, companies gave more emphasis on financing through long term loans as compared to short term borrowings. But from the year 2011-12, financing through long term loans shows decreasing trend, and financing through short term borrowings increases. No new issue of share capital has been made on regular basis by most of the companies under study. All the companies have given more emphasis on financing through long term borrowings. The variation of each component in the liabilities structure (aggregative and company-wise) shows more or less uniform pattern except short term borrowings.
2. Each individual investment company has recorded positive growth rates in 'share capital' but only three of them (SCL, REL, and ILFSL) have growth rates which are statistically significant at 5% or less than 5% probability level. The growth rate (5.4%) of 'share capital' for all the sample investment

companies taken together is positive and statistically significant at 1% probability level.

3. The growth rates of 'reserves & surplus' of each individual investment company are found to be positive and statistically significant either at 1% or 5% level. Higher growth rate in reserves & surplus indicates high accumulation of profits over the years and higher accumulation of net worth of the shareholders. The growth rate (9.9%) of reserves & surplus for the aggregate sample investment companies is positive and statistically significant at 1% probability level.
4. Positive growth rate is observed in 'long term loans and advances' of each individual investment companies (except BACL and LTIDPL) which are statistically significant at 1% probability level. The growth rate (7.7%) of 'long term loan of the aggregate sample investment companies is found to be positive and statistically significant at 1% probability level.
5. The growth rates of 'short term loans and advances' of each individual investment company except ILFSL are found to be positive and statistically significant at 5% or less than 5% probability level. The growth rate (15.8%) of 'short term loans' for all the sample investment companies taken together is positive and statistically significant at 1% probability level.
6. In respect of 'provisions', it is found that BACL, REL, ILFSL, and LTIDPL have registered positive growth rates which are statistically significant except LTIDPL. A negative growth rate (-0.2%) is observed for the company SCL, which is found to be statistically insignificant. Another interesting fact is that the aggregate growth rate (4.9%) of 'provisions' for all the sample investment companies taken together is positive but statistically insignificant.

7. In case of 'other liabilities', positive growth rates are observed for each individual investment company. The results are found to be statistically significant in all the cases except for SCL and REL. The aggregate growth rate (11%) of 'other liabilities' for all the sample investment companies taken together is positive and statistically significant at 5% probability level.

Structure and Growth of Liabilities of Asset Finance Companies (Aggregative and Company-wise)

1. The liabilities structure of the selected asset finance companies (aggregative and company-wise) show almost the same pattern as in the case of the investment companies, both at aggregate and company-wise levels, i.e., more emphasis on financing through long term borrowings during the first few years of our study period. In other words, all the companies are found to have given more emphasis on long term borrowings till 2008-09. An increasing trend is observed from the year 2009-10 in respect of financing through short term borrowings as compared to long term borrowings for all the selected asset finance companies under study. The proportion of the components, such as share capital and reserves and surplus, shows more or less uniform trend at aggregative and individual company levels.
2. There is no change in the volume of 'share capital' in three asset finance companies (DFL, GFL, and CFL). The growth rates of each individual asset finance company are found to be positive and the results are statistically significant either at 1% probability level or 5% probability level in all the cases, except in the cases of MFL, SCUFL, and CIFCL. A negative growth rate (-0.6%) of 'share capital' is observed in STFCL although it is statistically insignificant. The growth rate (4.1%) of 'share capital' of the aggregate

sample asset finance companies is positive and statistically significant at 1% probability level.

3. A positive growth rate is found in 'reserves & surplus' in each individual asset finance company under study. It implies higher accumulation of profits for the shareholders and an increase in net worth of the shareholders. The growth rate (11.8%) of 'reserves & surplus' for all the sample asset finance companies taken together is positive and statistically significantat 1% probability level.
4. Negative growth rates are found for 'long term loans and advances' in two companies (SFL and GFL) which are, however, statistically insignificant, while CFL has recorded negative growth rate (-47.4%) for this component, which is statistically significant. The remaining ten companies except two companies (MFL and IFL) have recorded positive growth rates which are statistically significant at 5% or less than 5% probability level. The growth rate (5.6%) of 'long term loans' for sample asset finance companies taken together is found to be positive and statistically significant at 1% probability level.
5. The 'short term loans' have registered positive growth rates for each individual asset finance companies which are statistically significant either at 1% level or 5% probability level. The growth rate (20.2%) of 'short term loans' for all the sample asset finance companies taken together is positive and statistically significant at 1% probability level.
6. In respect of 'provisions', majority of the individual asset finance companies have registered positive growth rates, although the results are found to be statistically insignificant. The growth rate (6.5%) of 'provisions' for all the

sample asset finance companies taken together is positive and statistically significant at 1% probability level.

7. In respect of 'other liabilities', it is observed that seven asset finance companies (SEFL, MFL, SCUFL, SFL, IFL, MMFSL, and CFL) have experienced significant positive growth rates and two companies (GFL and STFCL) have experienced significant (in statistical sense) negative growth rates. Three companies (DFL, LTFL, and ICL) have registered positive growth rates but none of these growth rates is statistically significant at 5% probability level. One company (CIFCL) has negative growth which is, however, statistically insignificant. The growth rate (10.5%) of'other liabilities' for all the sample asset finance companies taken together is positive and statistically significant at 1% probability level.

8.6 Summary of Chapter 6 (Structure and Growth of Assets of the NBFCs: Aggregative and Category-wise)

In this chapter, structure and growth of 'assets' of the selected investment companies and asset finance companies have been analyzed at the aggregate level as well as the individual company levels.

Structure and Growth of Assets of Investment Companies (Aggregative and Company-wise)

1. On analyzing the asset structure of selected investment companies at aggregative level, it is found that more emphasis has been given on short term loans than on long term loans. From the year 20010-11, a decreasing trend is found in respect of short term financing and an increasing trend is observed in long term financing. The component values of investments, fixed assets, and cash and bank balances reveal more or less uniform trend in the sense of either

positive or negative during the period under study. The company-wise analysis shows that three companies (BACL, LTIDPL, and ILFSL) out of five companies have higher proportion of investment in the asset structure. In general, most of the companies have given more emphasis on short term financing. From the year 2010-11, few companies have experienced decreasing trends in short term financing but increasing trends in long term financing. Other components, however, did not show any significant break in their behavioral patterns during the study period.

2. In respect of 'fixed assets', it is found that four sample investment companies (BACL, LTIDPL, REL, and ILFSL) have recorded positive growth rates which are statistically significant (except BACL). SCL has recorded a negative growth rate (-3.7%) which is statistically insignificant. The growth rate (17.4%) of 'fixed assets' for all the sample investment companies taken together is positive and statistically significant at 1% probability level.
3. In respect of value of 'investment', all the individual investment companies have registered positive growth rate. The results are found to be statistically significant in all the sample companies (except SCL). Volume of investment and their effective positive growth over the years are important for the NBFCs to sustain in the long run. The aggregate growth rate (5.4%) of 'investments' for the aggregate sample investment companies are found to be positive and statistically significantat 1% probability level.
4. In respect of 'long term loans and advances', it is evident that all the individual sample companies have recorded positive growth rates and these growth rates are found to be statistically significant at 5% or less than 5% probability level. The higher growth rate of long term loans and advances

implies higher generation of interest income and lower level of idle fund available for loans to the borrowers for NBFCs. The growth rate (22.6%) of 'long term loans and advances' for all the sample investment companies taken together is found to be positive and statistically significant at 1% probability level.

5. In respect of 'cash & bank balances', only two companies (SCL and ILFSL) have recorded significant positive growth rates. The remaining two companies (LTIDPL and REL) reveal positive growth rates which are not statistically significant, and BACL recorded negative growth rate (-5.7%) which is statistically insignificant. The growth of cash and bank balances implies better liquidity position of the NBFCs. The growth rate (9.5%) of 'cash and bank balances' for all the aggregate sample investment companies is observed to be positive and statistically significant at 1% probability level.
6. With respect to 'short term loans and advances', all the individual sample investment companies have registered positive growth rates. However, the results are found to be statistically significant in two companies (LTIDPL and REL), while in the remaining companies (BACL, SCL and ILFSL) the results are found to be statistically insignificant. The growth rate (2.4%) of 'short term loans and advances' for all the sample investment companies taken together is positive and statistically significant at 5% probability level.
7. In respect of 'other assets', significant positive growth rates are observed in other assets of each individual investment sample companies. The growth rate (31.3%) of 'other assets' for all the sample investment companies taken together is positive and statistically significant at 1% probability level.

Structure and Growth of 'Assets' of Asset Finance Companies (Aggregative and Company-wise)

8. From the analysis of 'assets structure' of asset finance companies at aggregative level, it is found that more emphasis has been given on long term financing in relation to short term financing. But from the year 2010-11, a decreasing trend in long term financing is observed while an increasing trend is observed in 'short term financing'. Other components at aggregative level exhibit more or less a uniform pattern during the period under study. From the company-wise analysis, it is found that in most of the cases all the companies have put more emphasis on short term financing than on long term financing. From the year 2010-11, 'short term financing' shows a decreasing trend for some companies and an increasing trend in long term financing. In some cases, the reverse of the above mentioned situations have been observed. The proportions of other components of 'assets' at company-wise level exhibit more or less uniform patterns during the study period.
9. In respect of 'fixed assets', it is observed that five companies (SEFL, SFL, DFL, MMFSL, and ICL) have recorded positive growth rates which are statistically significant and five companies (MFL, GFL, LTFL, STFCL, and CFL) have recorded negative growth rates which are statistically insignificant. Two companies (SCUFL and CIFCL) are found to have positive growth rate which is statistically insignificant. One company (IFL) is found to have negative growth rate which is statistically significant. The growth rate (6.3%) of 'fixed assets' of all the sample asset finance companies taken together is positive and statistically significant at 1% probability level.

10. With respect to 'investment', six companies (SEFL, SCUFL, DFL, MMFSL, STFCL, and ICL) have recorded positive growth rates which are statistically significant. One company (CIFCL) shows negative growth rates which are statistically insignificant. Four companies (MFL, SFL, GFL, and LTFL) have recorded positive growth rates which are statistically insignificant and two companies (IFL and CFL) show negative growth rates which are statistically significant. Volume of investment and their effective positive growth over the years are important for the NBFCs' sustainability in the long run. Here, the situations for all the sample companies are not so encouraging, although the growth rate (9.9%) of 'investments' for all the sample asset finance companies taken together is positive and statistically significant at 1% probability level.
11. From the analysis of 'long term loans and advances', it is evident that eleven companies (SEFL, MFL, SCUFL, SFL, IFL, MMFSL, LTFL, STFCL, CFL, ICL, and CIFCL) have positive growth rates which are statistically significant while for the company, LTFL, the growth rate is insignificant. Two companies (DFL and GFL) reveal negative growth rates - one (GFL) is statistically significant while the other (DFL) is statistically insignificant. The growth rate (8.2%) of 'long term loans and advances' for the aggregate sample asset finance companies is found to be positive and statistically significantat 1% probability level.
12. In respect of 'cash & bank balances', eight companies (SEFL, SFL, IFL, GFL, MMFSL, LTFL, STFCL, and ICL) have recorded positive growth rates which are statistically significant, while three companies (MFL, SCUFL, and CFL) depict positive growth rates which are statistically insignificant. Two companies (DFL and CIFCL) have experienced negative growth rates which

are statistically insignificant. The volume of cash and bank balances and their growth implies better liquidity position, capability of paying short term loans of NBFCs and indicates the long term sustainability. Considering the behavior of the companies in respect of their performance indicator, 'cash and bank balances', we understand that their financial performances are not satisfactory although the growth rate (5.5%) of 'cash and bank balances' at the aggregate level is found to be positive and statistically significant at 5% probability level.

13. In respect of 'short term loans and advances', it is evident that all the sample individual companies have registered positive growth rates which are statistically significant. The growth rate (12.0%) of 'short term loans and advances' of all the sample asset finance companies taken together is observed to be positive and statistically significant at 1% probability level.
14. With respect to 'other assets', all the individual sample asset finance companies, except (MFL and SFL), have recorded positive growth rates which are statistically significant. The growth rate (16.5%) of other assets at the aggregate level is found to be positive and statistically significant at 1% probability level.

8.7 Summary of Chapter 7 (Financial Performance of each Category of NBFCs - A Comparative Analysis)

In this chapter, the growth of selected performance indicators (aggregative and company-wise) and performance assessment between each category of NBFCs (aggregative and company-wise) and within each category of NBFCs (company-wise) have been made.

Growth rates of selected performance indicators of selected investment companies and selected asset finance companies

ROA:

1. **Selected Investment Companies (Aggregative and Company-wise):** Majority of the sample companies have registered negative growth rate in ROA which are statistically insignificant. The growths rates for two companies (SCL and REL) are positive out of which, one (SCL) is having a statistically significant growth rate and for the other (REL) it is not. For NBFCs, though the quantum of fixed assets is relatively small, a minimum growth is desirable, but it did not happen. The growth rate (-10.1%) of ROA at aggregate level is found to be negative and statistically insignificant.
2. **Selected Asset Finance Companies (Aggregative and Company-wise):** The growth rates of ROA of eleven companies (MFL, SCUFL, SFL, DFL, IFL, GFL, MMFSL, LTFL, STFCL, CFL, and CIFCL) are positive and the same of eight companies (MFL, SCUFL, IFL, GFL, MMFSL, LTFL, CFL, and CIFCL) are statistically significant. The growth rates of three other companies (SFL, DFL, and STFCL) are statistically insignificant. Negative growth rates are observed for two companies (SEFL and ICL) out of which for one (SEFL) it is statistically significant and for the other (ICL) it is statistically insignificant. The growth rate (3.7%) of ROA for all the sample asset finance companies taken together is positive, though statistically insignificant.

ROCE

3. **Selected Investment Companies (Aggregative and Company-wise):** The growth rates of ROCE of three sample companies (BACL, LTIDPL, and ILFSL) are negative and statistically insignificant, while for companies (SCL

and REL), growth rates are found to be positive but statistically insignificant. So, in this context, the situation does not at all appear to be favorable. The aggregate growth rate (-0.8%) of ROCE is observed to be negative and statistically insignificant.

4. **Selected Asset Finance Companies (Aggregative and Company-wise):** The growth rates of ROCE of ten sample companies (MFL, SCUFL, SFL, IFL, GFL, MMFSL, LTFL, STFCL, ICL, and CIFCL) are positive and out of that, the growth rates of five companies (SCUFL, SFL, GFL, MMFSL, and CFL) are statistically significant. Only two companies (SEFL and DFL) have registered negative growth rates, out of which one (DFL) is statistically insignificant. In this respect, the situation for the NBFCs is to some extent desirable and the other encouraging fact is that the aggregate growth rate (3.4%) of ROCE is found to be positive and statistically significant at 5% probability level.

ROE

5. **Selected Investment Companies (Aggregative and Company-wise):** In respect of ROE, it is observed that two companies (BACL and LTIDPL) have recorded negative growth rates and two companies (REL and ILFSL) have recorded positive growth rates and the result of all these growth rates are statistically insignificant. Only one company (SCL) has recorded negative growth rate which is statistically significant. The aggregate growth rate (-2.2%) of 'ROE' for the entire sample investment companies taken together is negative and the same is statistically insignificant.
6. **Selected Asset Finance Companies (Aggregative and Company-wise):** It is observed that eight companies (SEFL, MFL, SCUFL, DFL, IFL, LTFL,

STFCL, and ICL) have experienced negative growth rates in ROE, although the results are significant only for two companies (SEFL and LTFL). Five companies (SFL, GFL, MMFSL, CFL, and CIFCL) have registered positive growth rates in ROE, although the results are significant only for three companies (SFL, GFL, and CFL). At the aggregate level, growth rate (-0.9%) of 'ROE' is found to be negative, but statistically insignificant.

NPR

7. **Selected Investment Companies (Aggregative and Company-wise):** The growth rate of NPR is negative for three companies (BACL, SCL, and LTIDPL), although the result is significant only for one company (BACL). For two companies (REL and ILFSL), NPR has registered positive and statistically insignificant growth rates. The aggregate growth rate (-2.8%) of 'NPR' for all the sample investment companies taken together is negative but statistically insignificant.
8. **Selected Asset Finance Companies (Aggregative and Company-wise):** It is observed that the growth rates of NPR of seven companies (SEFL, MFL, DFL, IFL, LTFL, STFCL, and ICL) are negative, although the results are statistically significant in four companies (SEFL, IFL, LTFL, and ICL) only. Six companies (SCUFL, SFL, GFL, MMFSL, CFL, and CIFCL) have registered positive growth rates, out of which the results are significant only for three companies (SFL, GFL, and CFL). Though, some companies have registered positive growth rates, the aggregate growth rate of 'NPR' for all the sample asset finance companies taken together is negative (-0.5%), but it is not statistically significant, however.

DER

9. **Selected Investment Companies (Aggregative and Company-wise):** The growth rates of 'DER' for three companies (LTIDPL, REL, and ILFSL) are positive and the results of two (LTIDPL and REL) of them are statistically insignificant. Two companies (BACL and SCL) have registered negative growth rates, although one of them (SCL) is statistically significant and the other (BACL) is statistically insignificant. The growth rate (-1.8%) of 'DER' at aggregate level is negative but it is statistically not significant.
10. **Selected Asset Finance Companies (Aggregative and Company-wise):** It is observed that the growth rates of 'DER' for all the individual sample companies are negative and these are statistically significant except for four companies (MFL, SFL, IFL, and GFL). The most discouraging fact is that growth rate of 'DER' at aggregate level is negative (-5.4%) and statistically significant at 1% probability level.

CR

11. **Selected Investment Companies (Aggregative and Company-wise):** The growth rates of 'CR' are negative for three companies (BACL, SCL, and REL), out of which the results are significant for two companies (BACL and SCL). Negative growth rates are observed for two companies (LTIDPL and ILFSL), out of which only one company (ILFSL) shows significant result. At the aggregate level, growth rate in CR is found to be negative (-9.0%) and statistically significant at 1% probability level.
12. **Selected Asset Finance Companies (Aggregative and Company-wise):** The growth rates of CR in nine companies (SEFL, MFL, SFL, IFL, MMFSL, LTFL, CFL, ICL, and CIFCL) are negative. However, the results are

statistically significant only for six companies (SEFL, SFL, MMFSL, CFL, ICL, and CIFCL). For four companies (SCUFL, DFL, GFL, and STFCL) the CR is found to have registered positive growth rates, two of which are statistically significant i.e., for the companies DFL and GFL. The aggregate growth rate of 'CR' for all the sample asset finance companies taken together is negative (-8.2%) and statistically significant at 1% probability level.

In brief, the behavior of the CRs that indicates short term liquidity and solvency of the companies, is very disappointing, as their declining trend points to the growing insecure cash requirements of the companies to meet the short term cash requirements.

Ratio Analysis (Aggregative and Company-wise)

13. **Selected Investment Companies (Aggregative and Company-wise):** The profitability performances as measured by the behavioral patterns of the selected financial ratios such as ROA, ROCE, ROE, and NPR of the investment companies are really very disappointing both at the aggregate level and disaggregate level. Even negative rate of returns has been observed for REL during the study period. The average long term loan solvency of each individual sample companies (except SCL) has maintained a lower D/E ratio in comparison to the aggregate D/E ratio, which implies that the majority of the sample companies have employed more equity than that of debt in financing their assets. The average short term solvency represented by the behavior of the CR of the 'aggregate sample companies' reveals higher level of liquidity, while majority of the individual sample companies have maintained a lower level of liquidity during the period under study.

14. **Selected Asset Finance Companies (Aggregative and Company-wise):** The profitability performance in terms of ROA, ROCE, ROE, and NPR of the asset finance companies (in aggregate) is not encouraging; it is rather disappointing, as they have shown no specific trend in the rate of returns. Similar results are observed in each individual sample companies under study. So far as long term solvency is concerned, the asset finance companies (both in aggregate and company-wise) have relied more on equity than on external debt in financing their assets. The short term solvency performance measured by CR shows higher level of liquidity maintained by the asset finance companies at aggregate level. The majority of the individual sample companies have also maintained higher level of liquidity during the study period, to word off the problem of short term insolvency.

A Comparison of the Average Performance of the Different Ratios between two sets of Companies (Aggregate):

Fisher's t-test has been used to test whether there is any statistically significant difference in the financial performance level of the two sets of companies.

15. The results of t-test show that out of six selected performance indicators, the results are statistically significant only for two performance indicators, namely, ROA and ROE, while the results are found to be statistically insignificant for the remaining four performance indicators, namely, ROCE, D/E Ratio, NPR, and CR. This shows that for majority of the cases, there have been no differences in performance at the aggregative level between the different categories of NBFCs.

Measuring differences in the Average Performances among the companies in each category of the NBFCs:

16. To examine whether there is any significant variation in the selected performance indicator among the selected companies under each category of NBFCs, we have employed the technique of one-way ANOVA. The null hypothesis (H_{O3}) that there is no statistically significant difference, is rejected for each category of NBFCs. It may be interpreted that there are significant differences in average performance among the selected companies with respect to all the selected performance indicators.

Determining the most important Performance Indicator(s) (Profitability Ratios)

17. In our study, we have considered a number of profitability ratios, such as ROA, ROE, ROCE, and NPR. All these ratios may not be equally important to explain the differences in the performances of the companies, measured in terms of their profitability. There might be one or two ratios; efficient management of the terms associated with these ratios can act as the main factor explaining the maximum variations in the profit earned by the companies. To locate the most important factors, we have carried out Factor Analysis (Principal Components Analysis).

    The results of factor analysis reveal that NPR (Net Profit Ratio) is the major factor that drives the aggregate performance of investment companies. In case of asset finance companies (aggregate), factor analysis cannot be applied since the KMO measure is found to be less than 50%.

Efficiency Measurement of NBFCs in respect of Selected Investment Companies and Asset Finance Companies:

18. To compare the selected NBFCs according to their physical performances, we have applied the method of Data Envelopment Analysis (DEA). For an effective DEA analysis, the number of decision-making units should be at least three times the sum of inputs and outputs. In our analysis, we have three outputs i.e., ROCE (overall profitability), D/E Ratio (long term solvency), and CR (short term solvency). In our study, considering the nature of the NBFC regarding the input variables, we have categorized two groups of inputs. One group comprises non-revenue items that are contained in the balance sheet which may be termed as 'Financial Health Components' and the other group comprises revenue items that appear in the Profit and Loss A/C which can be named as 'Earnings Components'. There are eleven input variables categorized under these two groups, namely, Financial Health Components (FHC) containing eight input variables and Earning Components (EC) containing three input variables. To reduce the number of inputs, we have applied the technique of Principal Component Analysis (PCA) (a method of Factor Analysis) to derive the most important regulating financial parameters to influence the efficiency score of the NBFCs derived from DEA.The new variables are formed with linear combinations following the equations comprising the 1^{st} variable (X_i) under the category of Financial Health Components (FHC) multiplied by the corresponding weights (W_i) as derived from the Component Score Matrix of PCA and 2^{nd} variable (Y_i) under the category of Earning Components multiplied by the corresponding weights (U_i) as derived from the Component Score Matrix of PCA. Finally, we have three

output variables and two new input variables extracted from PCA with 18 DMUs for our DEA analysis. Thus, it effectively follows the rule of thumb of DEA, i.e., the number of decision-making units should be at least three times the sum of inputs and outputs. The following results are found from DEA in respect ofthe selected companies under each category of NBFCs.

- In respect of selected investment companies, it is observed that out of 5 selected investment companies, only one company (SCL) is efficient and the rests are inefficient. But there are still some scopes to make the inefficient DMUs efficient either by making improvements in the outputs and/or by manipulating the input combinations with reference to Benchmarks and Slacks. It is also found that for most of the inefficient DMUs, the output ROCE need not be increased but the other outputs like DE and CR need to be increased to make them efficient.
- In respect of selected asset finance companies, it is observed that out of 13 selected asset finance companies, only 4 companies (DFL, CFL, ICL, and CIFCL) are efficient and the rests are inefficient in the situation given here by the recorded input-output combination. But there is certain scope in respect of inputs and outputs improvement parameters (Benchmarks and Slacks) to make them efficient. It is also found that for all the inefficient DMUs except one, the output ROCE and DE need not be increased but the other output CR need to be increased to make them efficient, although it is applicable only for 4 inefficient DMUs. Most of the adjustments are needed only for input

factors considering the benchmarks to make the inefficient DMUs efficient.

Relationships between selected Investment Companies and Asset Finance Companies and their efficiency scores:

19. In our study, we have carried out a cross tabulation analysis to find out any relationship that may exist between selected Investment Companies (IC) and Asset Finance Companies (AFC) and between their efficiency scores as derived by DEA during the period under study. It is found that the probability of being efficient by AFCs in general is 1.77 times greater than that of ICs, which indicates that the chance of becoming efficient by the selected AFCs is more than those of the selected ICs.

Overall Efficiency Measurement of the Selected Investment Companies and Asset Finance Companies:

20. In DEA, we have analyzed the company-wise efficiency including their benchmark and also slack analysis in order to find out the possibilities or scopes of these companies of becoming virtually efficient during the study period. The DEA, however, does not enable us to identify the factors internal or external, that contribute to the increase or decrease in the levels of efficiency in the financial performance of the companies classified under two groups, under the given input and output combinations. To identify the factors, both internal and external, we use Stochastic Frontier Analysis (SFA) - a parametric approach to the identification of the factors that explain change in the efficiency levels of the companies under study. It also enables us to determine the overall average efficiency level and the percentage by which the

efficiency levels of the companies can be increased with the help of the factors already identified by the same technique, i.e., SFA.

The SFA is a time oriented regression model. The random disturbance term in the model, which is stochastic term by the nature of its randomness, comprises some components that directly help us to identify the hidden element or elements that contribute/s to the efficiency or inefficiency of the DMUs provided the effect(s) of the component or components in the stochastic (random) element is (are) statistically significant at the chosen level. In our study, we have used SFA's input oriented version

21. From the SFA model in our study, it is found that the probability of Chi^2 value for the SFA analysis of the selected ICs and the selected AFCs is zero. So, the model can be regarded as a stable one. From the analysis, it is observed that the variable Earning Components (ECs), i.e., revenue items have an impact as a stochastic impulse on efficiency level for the selected ICs and AFCs since the **s**tochastic impulse affects the overall efficiency. The overall mean efficiency of the selected ICs and the selected AFCs is less than 100% level. Therefore, it can be said that there is a possibility to increase the level of efficiency by 10% for the ICs and 35% for the AFCs with the existing level of inputs. Financial Health Components (FHCs), i.e., non-revenue items are increasing function of the independent variables. As the co-efficient of ROCE is found to be positive in both the cases i.e., ICs and AFCs, efficiency will increase for the selected ICs and AFCs. From the variation analysis (measured by standard deviation) for overall efficiency of the selected ICs and AFCs, it can be concluded that the variation in the exiting level of efficiency are much greater among the AFCs (0.24) than those among the ICs (0.072).

8.8 Results of Hypotheses Testing:

The results of hypotheses that were formulated in the study are stated as follows:

Hypothesis # 1: Null Hypothesis, H_{01}: There has been no significant growth in respect of various performance parameters during the period of study.

Alternative Hypothesis, H_{A1}: H_{01} is not true.

- t-test rejects H_{01} with respect to the components of assets and liabilities (except provision) of investment companies at aggregative level.
- t-test accepts H_{01} for all the selected performance indicators (i.e., Ratios) (except CR) of investment companies at aggregative level.
- t-test rejects H_{01} with respect to the components of assets and liabilities of asset finance companies at aggregative level.
- t-test accepts H_{01} for ROA, ROE, and NPR while the same rejects H_{01} for ROCE, DER, and CR of asset finance companies at aggregative level.
- t-test rejects H_{01} with respect to the components of assets and liabilities in majority of the cases of investment companies at company-wise level.
- t-test accepts H_{01} with respect to the selected performance indicators (i.e. Ratios) in majority of the cases of investment companies at company-wise level.
- t-test rejects H_{01} with respect to the components of assets and liabilities in majority of the cases of asset finance companies at company-wise level.
- t-test rejects H_{01} in majority of the cases for the selected performance indicators (i.e. Ratios) of asset finance companies at company-wise level.

Hypothesis # 2: Null Hypothesis, H_{02}: There is no significant difference in the average financial performance between the selected Investment Companies and Asset Finance Companies.

Alternative Hypothesis, H_{A2}: H_{02} is not true.

- Fisher's t-test accepts H_{02} for ROCE, DE Ratio, NPR, and CR and the same rejects ROA and ROE at aggregative level.

Hypothesis # 3: Null Hypothesis, H_{03}: There have been no significant variations in the average performance with respect to selected performance indicators among the selected companies under each category of NBFCs.

Alternative Hypothesis, H_{A3}: H_{03} is not true.

- One-way ANOVA (F-test) rejects H_{03} for all the selected performance indicators.

8.9 Overall Conclusion:

Individual company-wise analysis as well as aggregative analysis of structure of assets and liabilities of both the categories of NBFCs show almost same pattern of movement over the study period as far as main components like short term borrowings and financing, long term borrowings and financing, and investments are concerned. In relation to the main objectives of the study, i.e., growth of performance indicators (assets, liabilities, and selected ratios) under different categories of NBFCs, we find satisfactory results in respect of growth of assets and liabilities at aggregative level as well as company wise level. But dissatisfactory results are found in respect of growth of different ratios as performance indicators of NBFCs. Despite significant growth of assets and liabilities we find lower rate of returns; so it clearly indicates inefficient management of earning components (revenue and expenditure) during the study period both at aggregative level as well as company wise level.

It is also found in our study that capital structure of the NBFCs is not managed in the way it should have been. In this respect, it is observed that the overall management of long term solvency (DE Ratio) and short term solvency (CR) position of the NBFCs

are found to be dissatisfactory. The most interesting fact is that more or less the same pattern is noted for the companies under each category. Therefore, to keep the risk profile of the NBFCs at a minimum level and maximizing the wealth of the NBFCs, it demands a sound financial management.

On the analysis of selected profitability indicators (i.e., ROCE, ROA, ROE, and NPR), all the key ratios that are highly applicable for NBFCs are also found to be threatening in respect of their growth and average performance. The same result is also found for each category of NBFCs.

So far as the performance assessment of each category of NBFCs is concerned, it is found that there is no significant difference between the average performances for majority of the performance indicators of each category of NBFCs at aggregative level. However, it is found that significant difference with respect to selected performance indicators exists within the companies under each category of NBFCs.

Considering the present operating position of the NBFCs, the DEA reveals that only 28% (approximately) of our sample companies are efficient but the only positive aspect is that they need some moderate modifications in respect of their financial health components, earning components, profitability ratios, and solvency ratios to become efficient.

SFA model has been used to measure the overall efficiency of the selected ICs and AFCs and to identify the factors contributing to different efficiency levels of the company. It is observed that the input variable 'EC' has an impact as a stochastic impulse on the efficiency level of the selected ICs and AFCs. As the overall mean efficiency of the selected ICs and the selected AFCs is less than the efficiency norm, they need to be enhanced with their given levels of inputs to become efficient. In this

respect, it is found that the exiting level of efficiency varies more widely for the AFCs than for the ICs although both are operating below the efficiency level.

From cross tabulation analysis with respect to DEA, one interesting thing is observed that the probability of becoming efficient by the AFCs is slightly higher than ICs.

On the whole, it can be said from our study that there is no difference between the performances of each category of NBFCs, despite the fact that there exists difference in the nature of their activities.

8.10 Limitations of the Study:

1. The study is based on secondary data. So it is subject to all the limitations that are inherent with secondary data.
2. The interest income and interest expenses, which are the major components in the financial statements of NBFCs, are mainly related with long term and short term loans financing and borrowings. But the financial statements and their schedules of the selected NBFCs under study have no separate disclosure of interest on long term loans and interest on short term loans. Due to non-availability of data in this regard, further analysis of the performance assessment of NBFCs could not be carried out with respect to some relevant ratios.
3. The study is based on a small sample although adequate for the analysis of our study.

8.11 Scope for Further Research:

1. The study can be carried out over a longer time period that will include some more important characteristics of time series data, like secular trend, cyclical variations, and stochastic elements like sudden shocks or breaks.

2. The study can be carried out with a larger sample, enabling the researcher to overcome the problems normally associated with small samples.
3. Region-wise analysis may be carried out subject to availability of data. This type of analysis may uncover the role of regional factors contributing to the differences in the levels of performances of the NBFCs.

8.12 Suggestions/Recommendations for improvement of the performance of the NBFCs:

1. The NBFCs should follow proper disclosure in preparation of schedules of the financial statements as per the required formats available in the Companies Act, 1956/Companies Act, 2013.
2. The rates of return, measured by ROCE and ROA in particular, of the NBFCs are found to be very low in our study. Hence, the recommendation that may be offered here is that the NBFCs should manage the earning components effectively in respect of the capital employed to increase the overall profitability of the shareholders.
3. The NPR of the NBFCs is also found to be low during the period of study. Therefore, the NBFCs should concentrate more ~~to~~ on generating higher proportions of profit in terms of their total revenues.
4. The NBFCs should manage their capital structure effectively in terms of using external funds to make proper balance between operating leverage and financial leverage in order to keep the risk profile of the NBFCs to the minimum.
5. The NBFCs have maintained a relatively higher level of CR during the study period. So, the NBFCs should maintain a reasonable level of liquidity in order

to maximize the benefit of higher profitability by employing the excess fund in profitable activities.

6. Most of the NBFCs are under-performing in respect of their management of input and output factors; that are quite evident from our DEA and SFA analyses. So, attention should be given by the management to make their financial management more effective by focusing on the inputs that are responsible for under-performance of the companies.
7. In India, most of the NBFCs are operating as private limited companies. So, it is not mandatory for them to publish their annual accounts. However, it is suggested that they would publish some key annual information on financial activities so that the stakeholders and beneficiaries of the NBFCs are able to get few more useful financial information about the NBFCs. This will act as a marketing tool to encourage their stakeholders and beneficiaries to get them more financially associated with NBFCs. This will result in the increase of volume of business of the NBFCs.
8. RBI issues a list of NBFCs only. It is suggested that RBI should publish financial information in aggregate as well as in disaggregate forms. This will help the investors to make correct financial decision with respect to their investment decisions.