CAPITAL STRUCTURE MANAGEMENT: COMPARATIVE ANALYSIS OF ANNAPURNA FINANCE COMPANY LTD. & POKHARA FINANCE COMPANY LTD.

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RECOMMENDATION

This is to certify that the thesis:

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and found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirements for

Master's Degree in Business Studies (M. B. S.)

Viva-voce Committee

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Member (External Expert) : .....……...

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Date:

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Date: **Laxmi Paudel**

Prithvi Narayan Campus

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LIST OF ABBREVIATION

AFCL	:	Annapurna Finance Company Ltd.
B&FI	:	Banking & Financial Institution
BOD	:	Board of Directors
CAs	:	Current Assets
CLs	:	Current Liabilities
CR	:	Current Ratio
EBIT	:	Earning Before Interest & Tax
etc.	:	and the other
F/Y	:	Fiscal Year
FA	:	Fixed Assets
HMG	:	His Majesty's Government
Ind.	:	Indices
Ltd.	:	Limited
MBA	:	Master of Business Administration
MBS	:	Master of Business Studies
Mfg	:	Manufacturing
Mgt	:	Management
NRB	:	Nepal Rastra Bank
P.E	:	Probable Error
POFIL	:	Pokhara Finance Company Ltd.
Rs.	:	Rupees
SPSS	:	Statistical Package for Social Science
TA	:	Total Assets
TL	:	Total Liabilities
WACC	:	Weighted Average Cost of Capital

CHAPTER I

INTRODUCTION

1.1 Background of the study

Many factors affect the economic development of a country. Economic development of a country depend upon how well the business organizations are operate in that country. Every business firm needs funds to operate the business properly. The availability of adequate capital is necessary condition to operate a business. It cannot even imagine without capital. At the time of establishment, a firm may acquire equity and debt and equity. Enterprises, whether they are government owned or privately owned, have to make appropriate mix of debt and equity. Equity provides the ownership of the firm to the shareholders, and debt capital generates the fixed charge as interest periodically to the debt provider.

It is obvious that the economic development is impossible without the development of different sectors like agriculture, industry, trade etc. of the country. Banking sector plays an important role in the economic development of a country. So, there should not be any misunderstanding to the development of commercial banks. Considerable debate exists on the relationship between the financial system and economic growth. Historically, economists have focused on the banks and other related institution. Many scholars emphasize on the critical importance of banking system in economic growth. They show that the level of financial intermediation is a good predictor of long-run rates of economic growth capital accumulation and productivity improvements.(Levine & Fervos 1998:537)

Capital structure concept holds a major place in the financial management. Capital structure refers the proportion of debt and equity capital. A perfect balance between debt or equity is required to ensure the trade-off between risk and return to shareholders. Thus, optimal capital structure means the capital structure having reasonable proportion of debt and equity. An optimal financial structure makes better

use of society's fund of capital resources, and thus it increases the total wealth of society. Also, by increasing the firm's opportunity to engage in future wealth creating investment, it increases the economy's rate of investment and growth.

Capital can be acquire issuing debt, preferred stock, common stock and using retained earning. The combination of such component of capital call capital structure that differs from company to company. It should pay fixed charges for debt capital as interest periodically. After the payment of fixed interest from company's earning, balance is available to equity shareholders, out of which certain dividend will be declare. In this way, interest on debt capital decreases earning available to equity shareholders. Equity shareholders can earn total amount of profit if there is no presence of debt capital in capital structure.

Profit is one of the measurements of operating efficiency of organizations that deepens on capital structure. Optimal capital structure is such structure of capital that maximizes the value of the firm and minimizes the overall cost of capital. Optimal capital structure can be define in terms of risk and return because different source of capital consists of different risk and returns. The optimal structure is the one that trade of between risks and returns which maximizes the price of stock.

1.2 History of Financial Institution in Nepal

The economic development of a nation depends on agriculture, industries and commercial activities Government has to formulate the strategy and policies and have to implement them effectively in our country Nepal. The history of finance company is not so very old Goldsmith, merchants and money lenders were the ancient bankers of Nepal. In the 14^{th} century, king Jayasthiti Malla, the great ruler of medieval period, classified the people in different casts according to their occupation. Thankahari was one of the categories of people who worked as a moneylender. They used to invent money to the needy persons by charging some percentage as interest.

"Tejarath Adda" was the first step towards the institutional development towards financial institution in Nepal. It was established at B.S 1933 during the period of

prime minister Ranadip Singh. It granted loan to the people at 5% interest rate against gold, sliver and ornaments. At the beginning the service was for the government services holders repayable in installment basis to their salary. Later, the services was extended to the normal people as well. During the prime ministership of Chandra Shamser, Tejarath Adda extended its services by opening its branches outside Kathmandu vally. The history of modern financial system began by the replacement of Tejirath Adda by Nepal Bank Limited, which was established in 1937 A.D. (B.S. 1994), as the first commercial bank in Nepal. Nepal Bank Limited had a responsibility of attracting people towards banking sector from predominant money lenders and expanding banking services. It paid more attention to profit generating business and preferred to open branches in urban as it is a commercial bank.

One of the major responsibility of the government is to provide banking services everywhere in the country and also managing the financial system in a proper way. Thus Nepal Rastra Bank was established on 1956 A.D. (B.S. 2013/01/14), as a central bank under Nepal Rastra Bank Act 2012. Since then it has been functioning as the government bank and has contributed to the growth of financial sector. Within a decade of establishment of Nepal Rastra Bank many institutions such as Nepal Industrial Development Corporation (1959 A.D.), Employee Provident Fund (1962 A.D.), Rastrya Banijya Bank (1969), Agriculture Development Bank (1974 A.D.) and Securities Marketing Center (1976 A.D.) were established.

The country is in process of institutional restructuring of financial sector. The face of banking has changed tremendously after the adoption of financial liberalization policy since 1980s. The international wide of liberalization and the inadequacy and inefficiency service provided by the existing banks forced authorizes to open up the financial sector to the private sector both domestic and foreign. Hence, Nepal, in the process to make banking system more transparent and international delivery standard, can be observed that progressive liberalization of the banking system has brought out, among others, a sea change in the banking and financial activities.

Government made a significant effort to regulate the finance company Act 1985. The aim of this act was to guide economy in right way. After the political change in Nepal in 2047 B.S. the economic liberalization, the government for the industrialization has followed privatization and globalization. This policy gives more emphasis to the private sector encouraging factor sustainable economic growth, the new policy has already resulted in establishment of joint venture as well as private bank and finance companies. The policy of economic liberalization and globalization adopted by HMG/N will continue to evoke response from the industrial, financial and commercial sector of the country. The development of the financial system in Nepal is applicable. Still much more has to be done in making financial system as an effective intermediate for the mobilization of domestic savings in productive sector.

Till now, in our country, financial institutions are being successful to make the important position. Finance companies are new type of institutions and they came into existence because of the slow growth and traditional attitudes of commercial banks in mobilizing financial resources lack of financial innovations as well as the growing interest of public on ' uphar' or installment programs.

Finance company is registered under the finance company Act and license issued for operation is granted by NRB. The minimum paid-up capital of the finance companies is fixed at Rs 2.5 million but if the company(es) are interested in operating more than one activity or want to expand their branches, the minimum paid-up capital is fixed at Rs 10 million. However, the paid-up capital of Rs 30 million is fixed for the operation of leasing finance companies.

Due to the increasing demand of the customers, number of finance companies are increasing day by day, There are 79 finance companies in Nepal (www.organ.np). Among them Annapurna and Pokhara finance are both of the pioneer and leading finance companies of Pokhara. Here a brief introduction of Annapurna Finance Company Ltd.and Pokhara Finance Company Ltd. will be presents:

1.2.1 Annapurna Finance Company Ltd. (AFCL)

Annapurna Finance Company Limited (AFCL) is one of the best and old finance company in Nepal. It is the first finance company established in Pokhara and also the first finance company to establish outside the capital of Nepal. This finance company is the 'A' class finance company in Pokhara categories by NEPSE. It succeeds to achieve letter of appreciation from Nepal Rastra Bank. It was established in the year 2049 B.S. under finance company act 2042 B.S. But it was operated legally from 14th Aswin 2050 B.S. At first AFCL head office located in Chipledhunga, Pokhara but now it is in Kathmandu, Neal and 14 branch office in different parts of Nepal (Annual Report 2066/067). The main objectives of AFCL is to collect scattered saving of people through attractive different schemes, accept the deposit and mobilize the saving through financial instruments, convert them into capital and lend them to individuals and institutional borrowers. As a whole its main objective is to uplift the national economy by considering financial and technical facility to general public.

At the launching period it has authorized capital of Rs. 10 million, issued capital of Rs. 5 million and paid up capital of Rs. 3 million. Now it has increased its capital and it has authorized capital of Rs. 100 million, issued capital Rs. 70.8 million and paid up capital of Rs. 704 million (17th Annual Report 2066/067). There are eight members in the board of directors of which three members are elected by the general public shareholders and five members are presented from promoters of the company. All activities depend on the board except rules and regulation made by Nepal Rastra Bank (NRB). In these days Management Information System (MISC) plays a vital role for the betterment and result oriented managerial decision. Annapurna Finance Company also realized this fact. So, it has been gradually introducing computers based information system.

1.2.2 Pokhara Finance Company Ltd. (POFIL)

Pokhara Finance Company Limited is the independent and autonomous finance company was established in Pokhara on 2052 B.S. under the finance company act

2042. But it was operated legally from 3rd of Chaitra 2053 as second finance company in Pokhara. The main objective of POFIL is to collect dispersed savings of people, convert them into capital and lend them to individuals or institutional borrowers. As a whole, its main objective is to uplift the national economy by considering financial and technical facility to general public. It's head office is located at Gairapatan, Pokhara and branch offices at Shavagriha chowk, Pokhara, Bhimkalipatan, Pokhara and Sundhara, Kathmandu. At the starting period, POFIL had authorized capital of Rs. 4 corer, issued capital of Rs. two corer and paid-up capital of Rs. two corer but at present it has increased its authorized capital to Rs. 94 corer, issued capital of Rs. 31.2 corer and paid-up capital of Rs. 31.2 corer (14th Annual Report, 2066/067). There are seven members in Board of Directors of whom three members are elected by general shareholders and four members are from the promoters of POFIL. All the decisions of POFIL are taken by the BOD under the rules and regulation formulated by NRB as well as finance company act 2042 B.S.

For the better quality service and result oriented managerial decision, POFIL used computerized system to all transactions. POFIL collects deposits under the various deposit accounts (i.e. fixed normal saving, corporate saving, Gurkha Saving etc.) and it has invest it in different sectors like, hire purchase, trade loan, housing loan, industrial loan etc. As the result of effective management, POFIL is able to earn high profit even the political and economic situation of country is unfavorable.

1.3 Focus of the Study

Investors invest in the business organization as an ownership capital or debt capital with expectation of getting favorable profit in the future. Without proper capital utilization, it fails to meet their expectation and damage the image and credit worth of the organization and leads to fall the market value. This thesis is focused on analysis of capital structure management between Annapurna Finance Company Ltd. and Pokhara Finance Company Ltd finding true facts and recommendation for corrective measures pointing out the problems.

This study is based on the secondary data provide by the particular concerned Finance, which focus to evaluate the capital structure to test the impact of the capital structure on profitability. Debt to equity ratio and capital adequacy ratio that affects the profitability or not is the main concentrates issues on the thesis. This study mainly focuses on the capital structure management of the two finance companies.

1.4 Statement of the Problem

Finance Companies are maximize revenue and reduce its cost in the effective way in constraint of limited resources. Capital structure refers to the proportion of different types of securities issue by the firm like common shares, long-term debt, preference share capital, debentures and retained earnings. This study also trace out the problem under inefficiency and weakness base on the capital structure management of these two finance company AFCL and POFIL in Nepal such as,

- What is the trend of paid-up-capital between AFCL and POFIL in past five years?
- What is the trend of debt capital and equity capital?
- What are the ratio of debt capital and equity?
- What are the ratio of debt and total assets?
- How far the finances are able to serve the debt?
- How the finances are managing their core and supplementary capital adequacy?
- How efficiently these finances are able to earn the profit?
- What is the weighted average cost of capital?
- What are the relationship between capital structure and profitability ratio?

1.5 Objectives of the Study

The main objective of the study is to maximize the comparative analysis of capital structure management between two finance companies Annapurna Finance Co. Ltd. and Pokhara Finance Co. Ltd. This study also helps to find and suggest the ways of

improving the performance more effectively. The major objectives of the study are given below:

- To analyze the trend of paid-up-capital between AFCL and POFIL.
- To analyze the trend of debt capital and equity capital.
- To examine the ratio of debt and equity capital.
- To examine the ratio of debt total assets.
- To analyze the debt servicing capacity.
- To analyze the capital adequacy ratio.
- To evaluate the profitability position and to provide suggestion and recommendation for their improvement.
- To analyze the weighted average cost of capital.
- To evaluate the relationship between capital structure and profitability ratio.

1.6 Significance of the Study

This study, first attempts to identify capital components mix in the banking industry and their contributions towards profitability. Thus, outcomes of the study is help to suggest the effective measure which banking sectors can follow to convert the bad capital into good capital structure. It provides literature to the researchers who want to carryout future research in the same avenues. Basically, it is beneficial to:

- The study is helpful to shareholders regarding the capital structure of their finance companies. The comparison help them to identify the productivity of their funds.
- The study is helpful to manage of respective finances to go deep into the matters as why their performance is better than of their competitors.
- The study is prescriptive to the policymaker while formulating the policy regarding finances.
- The customers, financing agencies, stock exchanges and stock trade are interest in the capital structure of finances. By this study the customers can have clear view to which bank or finance they can entrust.

1.7 Limitation of the Study

Basically, the research is done for partial fulfillment of MBS. But the study has its own limitation which is listed below:

This research study has been conducted with certain limitation and boundaries that researcher may not try to go across.

- This study is concerned only with the capital structure management of two finance companies.
- The study explore only the finance AFCL and POFIL
- The study cover only last five year period.
- The study is based on secondary data collected from finance and their websites.
- Basically long-term debt is used on capital structure analysis but due to not available of actual data total debt is used on the place of long term debt.

1.8 Organization of the Study

The report of the study will be categorized into five chapters:

Chapter 1: This chapter is the introduction chapter which coveres the background of the study, focus of the study, statement of the problem, objectives of the study, significance of the study, limitation of the study and organization of the study.

Chapter 2: In second chapter it includes review of relevant study, review of previous study, research papers and published articles and unpublished master's thesis paper of T..

Chapter 3: The third chapter describe the research methodology applied for the study. It includes research design, sources of data, population & sampling, methods of data collection and tools of data collection.

Chapter 4: Chapter four compromises presentation and analysis of data by using financial and statistical tools.

Chapter 5: Chapter five presents the summary, conclusions and recommendations.

CHAPTER – II

REVIEW OF THE LITERATURE

2.1 Conceptual Review

Conceptual framework is the most important part of every study. Without knowing the clear concept on the subject matter; the study may not go through right way. Therefore, the review of literature is taken as very important essential part which works as a cornerstone of the study. This chapter focuses on the review of relevant theoretical literatures and previous related studies. It provides a guideline for further study, which helps to avoid the unnecessary duplication in research work. This chapter is divided into two parts conceptual review and research review. Conceptual review includes definitions and summary of different books and authors and research review includes the review of article published in different journals and other relevant unpublished past studies.

This section of the study consists of the terms and conditions related to the study and which are very helpful for the further study also. Here an attempt is made to review the conceptual aspects regarding the history of financial institutions in Nepal and capital structure. It presents the theoretical aspects of the study. It includes the history of financial institution in Nepal, concept of capital structure, optional capital structure, theories of capital structure

2.1.1 Concept of Capital Structure

The term financial structure refers to the composition of all sources and fund to invest in business. Thus, it represents the entire capital and liability side of the balance sheet. On the other hand, the term capital structure is used in restrictive sense. It refers to the composition of long-term sources of finance such as preference capital, debenture, long-term debt and equity capital including reserve surpluses (i.e. retained earnings and exclude short-term debt). Thus capital structure is about analysis of capital

composition of the company " capital structure is the permanent financing of the firm, represented by long-term debt, preferred stock and credit. Thus a firm's capital structure is only a part its financial structure i.e. common stock, capital surplus and accumulated retained earning" (Westun and Brigham, 1989: 666). Capital structure or the capitalization of the firm is the permanent financing represented by the long-term debt, preferred stock and shareholders' equity. Thus, a firm's capital structure is only a part of its financial structure (Weston and Copeland, 1992:565). The term capital structure is use to represent the proportionate relationship between debt and equity. The market value of share may be affected by the capital structure decision. (Pandy, 1995: 573).

A financial manager must strive to obtain the best financing mix or optimum capital structure for his/her firm. The firm's capital structure is optimum when the market value of share is maximized. The used of debt affects the return and risk of shareholders, this will increase the return on equity but also the risk at the market value per share will be maximized and the firm's capital structure would be optimum (Pandey,1995:663). Both debt and equity are used in most large corporations. The choice of the amount of debt and equity is made after a comparison of certain characteristics of each kind of security of internal factors related to the firm's operation, and external factor that can affect the firm's (Hampton, 1986:42). The choice of debt and equity largely depends on the three factors such as cost, risk of return for the firm. The riskiness of a firm alters with the change in debt-equity mix and so on earning and maintaining control can be favorable whenever capital structure decisions are made.

2.1.2 Optimal Capital Structure

An optimal capital structure would be obtained at the combination of debt and equity the maximize the total value of the firm, (value of debt plus value of stock) or minimize the WACC (Pandey, 1995:675). Capital structure decision affects the value of firm, earning per share and cost of capital. The objectives of a company is always

related to maximizing the value of firm, earning per share and minimizing the overall cost of capital. To achieve this objectives, company should make the appropriate composition of capital structure, which is also known as optimal capital structure.

Optimal capital structure can be defined as that mix of debt and equity, which will maximize the market value of the firm. If such as optimal does exits, it maximizes the value of the company and hence the wealth of its owners maximizes. It minimizes the company's cost of capital, which in turn increases its abilities to find new wealth creating investing opportunities (Ezra, 1969). The optimal capital structure is the one that strikes the optimal balance between risks and returns and these by maximizes the value of the firm, earning per share, and minimizes the weighted average or overall cost of capital. Therefore, the firm should determine appropriate capital structure, to achieve its targeted objective of maximizing the shareholder's wealth. "Although, it is theoretically possible to determine the optimal capital structure, as a practical manner we cannot estimate this structure with precision" (Weston and Brigham, 1989:719).

2.1.3 Theories of Capital Structure

Capital structure is the determinant of overall cost of capital and its affects the value of the firm by affecting either in expected earnings or in the cost of capital or in both. Alternatively, the use of debt in capital structure affects value of the firm through the cost of capital and optimum capital structure exists in practice. Optimal capital structure is the mix of the capital component which leads maximum value and minimum overall cost of capital in the firm. These are various theories relating the capital structure of the firm. Capital structure decision affects the total market value of the firm, earning per share and firm's cost of capital. So the theories of capital structure closely related to the firm's cost of capital. Many theories about the capital structure have been developed in the field of financial management. In this regard some basic assumptions are necessary to know that are following:

- There are no corporate of personal income taxes and no bankruptcy cost.

- The ratio of debt to equity for a firm is changed by issuing debt to repurchase stock of issuing stock to pay of debt. In other words, change in capital structure is effected immediately. In this regard, we no transaction cost.
- The firm has a policy of paying 100% of its earnings in dividend. Thus, we abstract from the dividend decision.
- The expected value of the subject probability distribution of expected future operating earnings for each company are the same for all investor in the market.
- Expected values of the probability distributions of expected operating earnings for all future periods are the same as present operating earnings.
- Besides these assumptions, the following symbols related to capital structure theories are used:

B = Total market value of debt
S = Total market value of stock
V = Total market value of firm (B+S)
K_e = Equity capitalization rate
K_i = Cost of debt/ Yield on debt
K_o = Overall capitalization rate
I = Total amount of interest
EBIT = Earning before interest and taxes or net operating income

In respect of capital structure decision different views have been expressed by financial wizards. These views can be categorized into four important theories;

- Net Income Approach
- Net Operating Income Approach
- Traditional Approach
- Modigliani— Miller Approach

Net Income Approach:

Net income approach focuses on the increase in total valuation of the firm through the reduction in the cost of capital leading to an increasement in the degree of leverage. It is also known as dependent hypothesis of capital structure. The essence of this approach is that the firm can reduce its cost of capital by using debt. "The approach is based on the crucial assumption that the investors. Consequently, the interest rate on debt (k_i) and equity capitalization rate (k_e) remains constant to debt" (I.M. Pandey, 1996:28).

"The emphasis is on EBIT is measure how the degree of leverage brings change in valuation of the firm. Assuming a constant equity capitalization rate, increase in cheaper debt funds lowers the weighted average cost of capital and there by rising the value of the firm and the increasing in debt may not increasingly risky"

The crucial assumptions of NI approach are:

- The use of debt does not change the risk perceptions of investors; as a result, the equity capitalization rate and the debt capitalization rate remain constant with change in leverage.
- The debt capitalization rate is less than equity capitalization rate (i.e. $k_d < k_e$).
- The corporate income tax does not exist

"Therefore as the firm increasing its leverage by increasing level of debt relative to equity, the overall cost of capital declines. The importance of this levered overall cost of capital is that is increase the value of firm" (M.K. Shrestha)

Overall cost of capital can be expressed by following formula:

$$\text{Overall Cost of Capital} = \frac{Net\ Operating\ Income}{Total\ Value\ of\ the\ Firm}$$

Or $\frac{EBIT}{V}$

Another formula for 'k_o' is; $k_o = k_e - (k_e - k_i)\ B/V$

As per assumption of NI approach k_e and k_i are constant and ki is less than k_e. Therefore, k_o will decrease as B/V. Also $k_e = k_o$ when B/V = 0

This approach is graphically show in the following figure:

Fig. 1

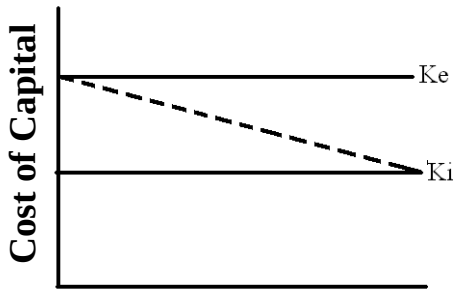


Fig. Net Income Approach (Cost)

Fig. 2

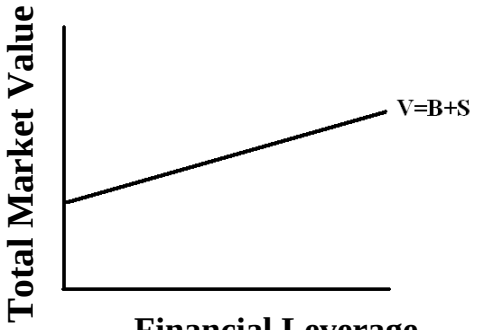


Fig. Net Income Approach (Value)

Figure 1 and 2 shows that under the NI approach the overall cost of capital (k_o) will decline and value of firm increase with leverage. The optimal capital structure would occur at point, where the value of the form is maximum and overall cost of capital is minimum. That will have the maximum value of the lowest cost of capital when it is all debt financed of has as much debt as possible. If the firm in is unleveled the overall cost of capital will be just equal to the equality capitalization rate (i.e $k_o=k_e$).

(II) Net Operating Income Approach (NOI)

The Net Operating Income Approach which is slightly different from the NI approach. It is an independent hypothesis of capital structure decision of the firm is irrelevant. Any change in leverage will not lead to any change in the total value of the firm and market price of share, as the overall cost of capital is independent of the degree of leverage(M.Y khan and P.K Jain,1992:495). The NOI approach assumes that equality holders feel higher degree of financial risk and demand higher rate of return for high debt to equity ratio. Furthermore, this approach says that the cost of equity increases

with the level of debt and the higher cost of equity offsets the benefit of cheaper debt financing consequently no effect at all on k_o, in another word , overall capitalization rate 'k_o' as well an the cost of debt 'k_i' remain constant regardless of the degree of leverage. The critical assumption of NOI approach are (I.m Pandey, 1999:681):

- The market capitalizes the value of the firm as a whole. Thus the split between debt and equity is not important.
- The market uses an overall capitalization rate, k_o to capitalize the net operating Income; k_o depends on the business risk. If the business risk is assumed to remain unchanged 'k_o' is a constant.
- If the use of less costly debt fund increases, the risk of the shareholders increases. So, the equity capitalization rate(k_e)increase.
- The debt capitalization rate, k_o is constant
- The corporate income taxes do not exit.

"Under NOI approach the capital structure selected in more detail since the value of firm is independent of the firms capital structure. If the firm increases its use of financial leverage by employing more debt this is directly offset by an increase in the cost of capital." (M.K Shrestha)

Fig. 3

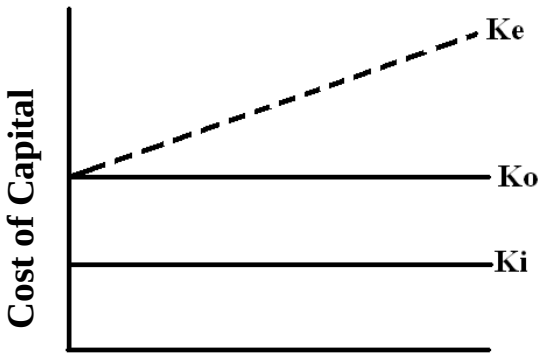


Fig. Net Operating Income Approach (Cost)

Fig. 4

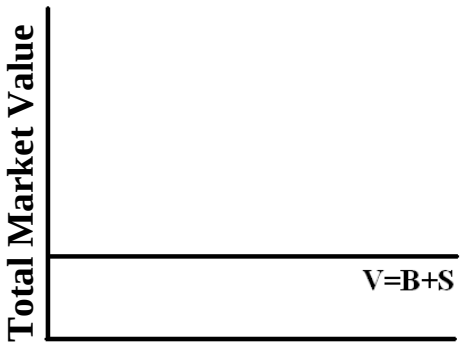


Fig. Net Operating Income Approach (Value)

The figure 3 and 4 show that 'k_o' and 'k_i' are constant 'k_e' is increasing. While 'k_e' is in increasing position but value of firm will constant with leverage. "At the extreme degree of financial leverage hidden cost becomes very high, hence the firm cost of capital and its market value are not influenced by the use of additional cheap debt fund" (Gitman and Pinches: 791)

Which can be expressed as:

$k_e=k_o+(k_o-k_d)\ D/S$

Thus this approach suggests that there is not any optional capital structure.

III Traditional Approach

In this theory "the value of the firm is determined by adding the market value of the firms debt to market value of its equity. Once market value has been determined by the overall cost of capital or overall capitalization rate, can be found" (Lowrence J. Gitman: 42 to 43)

It is also known as an intermediate approach it comprises between net income approach and net operating income approach.

"The cost of capital decline with leverage because debt capital is cheaper than equity capital within reasonable, or acceptable, limit of debt. The statement that debt funds are cheaper than equity fund carries the clear implication that the cost of debt plus the increased cost of equity, together on a weighted basis , will be less than the cost of equity which existed on equity before debt financing" (Alexander Barger,1963:11)

At last we know that from traditional approach, overall cost of capital will decrease with the use of debt financing. From traditional approach the manners in which the overall cost of capital reach to changes in capital structure can be divided into three stages are given below.

Stage-1

In this stage, the cost of k_e, remain constant of less slightly with debt. But when it increases it does not increase fact enough to offset the advantage of low cost of debt. k_d, remains constant or rises negligibly. Since the market views the use of debt as a reasonable policy. As a result, the value of the firm 'v' increases or the overall cost of capital , k_o= x/v

Stage - 2

In this stage, the firm has reached a certain degree of leverage increasement in leverage have a negligible effect on the value, or the cost of capital of the firm. This is so because the increasement in the cost of equity due to the added financial risk offset the advantage of low cost of debt. Within the range of at the specific print, the value of the firm will be maximum or the overall cost of capital will minimum" (I.M Pandey 633.)

Stage- 3

In this stage, after the acceptable degree of leverage, the market value of the firm decreases with leverage or the overall cost of capital increase with leverage. This happens because the cost of debt and equity will tend to rise as a result of increasing the degree of financial risk that will increase in the overall cost of capital by more than to offset the advantage of low cost debt. Thus in third stage, the market value of the firm will show depressing tendency.

The overall effect of these three stages is to suggest that the cost of capital is a function of leverage. First it declines with leverage and after reaching a minimum point or range it starts rising. The minimum point defines the optional capital structure. This fact in graphically shown in a figure below:

Fig. 5

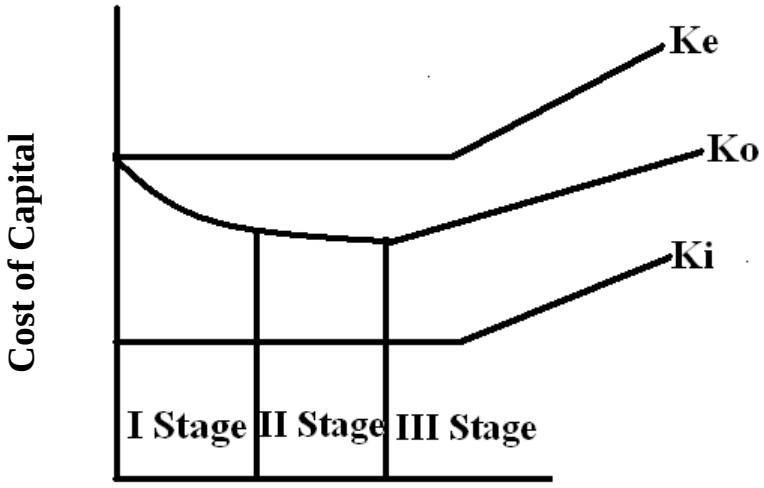


Fig. The cost of Capital Behavior
(Traditional View-a Variation

Under such situation, there is a precise point at which the cost of capital would occur at the optimum degree of leverage at which marginal cost of debt is equal to the overall cost of capital.

(V) Modigliali - Miller Approach (M-M approach)

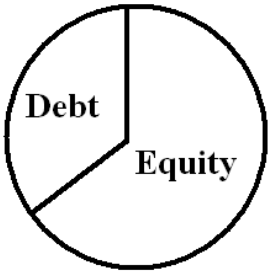
Modigliani and Miller (MM) in their original position advocate that the relationship between leverage and the cost of capital is explained by net operating income approach. They make a formidable attack on the traditional position by offering behavioral justification for having the cost of capital, k_o, remain constant throughout all degree of leverage(James C. Van Horn 2000:255) The Modigliani and Miller (M-M) explain their theory based on the following important assumptions:

- Capital markets are perfect Information is cost less and reading available to all investors. There are no transaction costs, and all securities are divisible. Investors are assumed to be rational and to behave accordingly.
- The average expected future operating earnings of a firm are represented by subjective random variables. It is assumed that the expected values of the probability distribution of all investors are the same. The M-M illustration implies

that the expected value of the probability distribution of expected operating earnings. For all future periods are the same as present operating earnings.

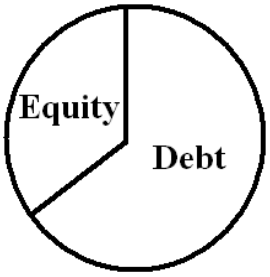
- Firm can be categorized in to "equivalent return" classes. All firms with in a class have the same degree of business risk. As we shall see that later this assumption is not essential for their proof.
- The absence of corporate income taxe is assumed M- M removes this assumption later.

Fig. 6



Value of Firm

Fig. 7



Value of Firm

Fig: Illustration of capital structure irrelevancy simply put, M-M proposition is based of the idea that if matter how you divide up the capital structure of a firm among debt, equity and other claims there is conservation of investment value (John Burr William 1938: 72 to 73). That is because the total investment value of a corporation depends on its underlying profitability and risk, it is invariant with respect to relative changes in the firms financial capitalization. Thus, the total pie does not change as it divided in to debt, equity and other securities. The sum of the parts must equal the whole; so regardless of financing mix the total value of the firm stays the same according to M-M. The idea in illustrated with the two pies in figure. Different kinds of debt and equity do not alter the size of the pie total values stays the same.

The support for this position rests on the idea that investors are able to substitute personal for corporate leverage, there by replicating any capital structure the firm might under take. Because the firm is unable to do something for its stock holders (leverage) that they cannot do for themselves, capital structure changes is not a thing of value in the perfect capital market world that M-M assumes. Therefore, two firms

alike in every respect expect capital structure must have the same total value. If not arbitrage will be possible, and its occurrence will cause the two firms to sell in the market at the same total value.

2.2 Research Review

In these days information highway or the internet has become to the most powerful accessible medium to gain information in any subject matter. In the study period, different books, journals and articles have been consulted. The study has been also used PERI database, which is available in Western Regional Library of Prithvi Narayan Campus. The research studies and work papers carried out by different scholars within various geographical region including dissertation conducted by Nepalese scholars are also reviewed in this section, which are related with the capital management of financial sector or the area of the study. The review of relevant articles published in different journals are available on-line on International Network for the availability of scientific publication (INASF) where data base has been reviewed and presented.

2.2.1 Review of the Related Journals/ Articles

Shrestha, (1993) conducted a study on "Capital Structure Management in Public Companies". She used data of 19 companies and the study covered different sectors manufacturing, finance, utility service and other area. She found that the companies have relatively higher debt capital than equity capital. Consequently, most of them are operating at losses, to the extent that interest payment on loan has been serious issue in these organization. Due to the higher amount of debt in capital structure all of the enterprises are facing the problem of properly servicing the debt. In this way, she has suggested that the government have to consider in public enterprises by evaluating the relationship among the variables that are important in designing capital structure as well as the use of debt and its impact on overall earnings. Nepalese public enterprises are absorbing the huge amount of government funds. So, it is necessary to develop a suitable capital structure guideline for these enterprises from the side of government.

Because the funds used in public enterprises is not a cost-less fund. To make the more realistic capital structure, it is needed to analyze the cost and risk-return trade off. Thus, policy makers should have to be careful in developing capital structure guidelines for public enterprises and the companies/ organizations also to be aware of financial accountability.

Calem and Rob, (1996) carried out a study on " The Impact of Capital- Based Regulation on Bank Risk-Taking: A Dynamic Model." In this paper, they attempt a dynamic modeling of the moral hazard problem and how, it might be affected by various regulatory instruments. The model considers banks that operate in a multi period setting with the objective of maximizing the discounted value of their profits. A bank assumed to operate in a multi period setting; the bank's capital may fluctuate over time depending on the realized returns on loans, as well the bank's portfolio choices. Thus, they consider the dynamic of bank portfolio choice and behavior of well capitalized as well as under-capitalized banks. A severely undercapitalized bank typically takes on maximal risk in an effort to improve its capital position, even if the risky asset provides a lower expected return than the safe asset. This result suggests that moral hazard is serious problem among banks near to insolvency; thus it provides a formal rationale for the prompt corrective action (PCA) provisions of FDCIA.

Davis and Lee, (1997) conducted a study on "A Practical Approach to Capital Structure for Bank's." In this article, American's bank's attention to capital structure is reflected in their high level of stock repurchases in recent years. The most important difference comes for regulation, since the implementation by FDCIA of risk based capital guidelines in the early 1990_s, the capital ratio of U.S. banks have increased substantially. In fact, most U.S. banks today carry considerably more capital than is required by the regulators. This tendency to exceed regulatory capital levels is especially pronounced for smaller institutions, which can in turn be explained by the riskier profile of smaller banks they also have a much greater degree of co-variance among their riskier assets. This article recommends using a quantitative economic approach to generate a lower bound on the amount of necessary capital. This estimate can be translated into a target capital structure by taking consideration including

bank's preference to maintain capital levels that provides a comfortable margin above bank regulator's "well capitalized" levels. Although such considerations will vary in importance from one bank to another they well generally include management's risk tolerance, regulatory constraints, market pressures, the bank's prospects and investment plans, and, for larger banks, rating agency requirement.

Booth et. al. (2001) have conducted a research work on capital structure in developing countries. The purpose of the study was to analyze the capital structure choices made by companies from developing countries having different institutional structure and economic structure. The study was attempted to search the answer of three different questions. Data and information were collected from the International Finance Corporation (IFC). In addition with this source, other related data and information were collected from 10 different countries. Such as India, Pakistan, Thiland, Malaysia, Turkey, Zimbawe, Mexico, Braizel, Jordan and Korea. Different common financial and mathematical tools were used to analyses the gathered data. In this study, a new firm-level database was used to examine the financial structure of firm in a sample of 10 developing countries.

Abor, (2005) has conducted a study on " The effect of Capital Structure on Profitability: an empirical analysis of listed firm in Ghana." This paper seeks to investigate the relationship between capital structure and profitability of listed firms on the Ghana Stock Exchange (GSE) during a five year period. Regression analysis is used in the estimation of functions relating the ROE with measures of capital structure. The results reveal a significantly positive relation between the ratio of short-term debt to total assets and ROE. However, a negative relationship between the ratio of long-term debt to total assets and ROE was found. With regard to the relationship between total debt return rates, the results show a significantly positive association between the ratio of total debt to total assets and return on equity. The research suggests that profitable firms depend more on debt as their main financing option. In the Ghanaian case, a high proportion (85 percent) of debt is represented in short-term debt.

Abeysekera, (2007) has examined the "Intellectual Capital Reporting (ICR) between Developing and Developed Nation." This paper aims to examine the patterns of intellectual capital reporting of large listed firms in a developing nation, Sri Lanka. The aim of this study is to highlight the difference in ICR practice between developing and developed nations. The paper begins by examining each of the top 30 firms by market capitalization listed on the Colombo Stock Market exchange in 1998/1999 and 1999/2000. Using the content analysis method, it reviews the annual report of these firms to determine the types of intellectual capital (IC) items reported in Sri Lanka. It then compares these findings with a similar study undertaken in Australia during the same period. The findings in this paper highlight the need for a uniform ICR definition and reporting framework that provides comparative and consistent reporting under the auspices of a regulatory body. ICR differences were identified between Sri Lankan and Australian firms, and it is argued that these differences can be attributed to economic, social and political factors. This paper highlights important policy issues for Australia, Sri Lanka and other nations. These issues are even more pertinent in the light of the gradual international adoption of the International Financial Reporting Standards ($IFRS_s$), formulated by the International Accounting Standards Board (IASB). Most papers on intellectual capital reporting have focused on firms in developed countries. This paper offers insight into comparative reporting practices between a developed and a developing country.

Review of Master's Dissertations

Several thesis works have been conducted by various researchers regarding different aspects of finance such as capital structure, financial performance, investment policy, interest rate structure, and resource mobilization. Except from the findings of some of these research works are presented which are relevant for this study.

Pathak, (1999) has conducted a study on " Capital Structure and Profitability: A Comparative case study between Nepal Indosues Bank Ltd. and Nepal Grindlays Bank Ltd," has found that both banks are highly leveraged of capital structure and suggested that the banks are required to maintain improved capital structure by equity base i.e.

issuing more capital expanding general reserve and retaining more earning. Both banks having geared up capital structure position and in sufficient return representing weak aspect of these two banks are suggested to use the resources into the most forfeitable sector.

Rajlawat, (1999) worked on "The Capital Structure of Necon Air Limited." The main objective of the study is to analyze and examine the capital structure of Necon Air Limited, policies and review various previous studies relation to the study. The study used primary as well as secondary data for the analysis. The methodology used includes financial tools such as ratio analysis and statistical tools such as correlation coefficient and probable error. The study has found that Necon Air Limited has debt equity ratio higher than required. This higher debt capital is a serious implication from the firm's point of view. In this condition, the capital structure will lead to inflexibility in operation of the firm as creditors would exercise pressure and interfere with management. Necon Air has raised debt from different commercial banks and has to pay heavy portion of profit as interest, so the payment of the interest will be hazardous when profit is declining. So it is suggested that Necon Air Ltd. should decrease its debt capital as far as possible. It has added that the ration of 2:1 is the debt ratio for optimal capital structure.

Pandey, (2003) has conducted a study on "Capital Structure of Standard Chartered Bank Ltd. and Nepal Bangladesh Bank Ltd." The basic objective of the study was to analyze the interrelationship of capital structure with various important variables such as earning per share, dividend per share and net worth of the joint venture banks and to provide suggestions to overcome various issues and gaps.

The study has used financial tools such as ratio analysis, EBIT-EPS analysis, overall capitalization rate, equity capitalization rate, total value calculation etc and statistical tools such as Karl Pearson's correlation and probable errors.

The study concluded that all the joint venture banks are using high percentage of total debt in raising the assets and all the banks are able to pay the interest. The study

suggested that the bank must control total deposit and the bank also must control fluctuations in the earnings per share to improve its market price per share.

Shah, (2004) has conducted a study on " A study on the Capital Structure of Manufacturing Companies (Nepal Lever Ltd., Buttlers Nepal Ltd., Sriram Sugar Mills, Jyoti Spinning Mills, Arun Vanaspati Udhyog)", the study with a purpose to access the debt serving capacity of the mentioned manufacturing companies, examining the relation between return on equity and total debt, return on equity and debt ratio, earning after tax and interest and earning before interest and tax. Both financial tools such as ratio analysis as well as statistical tools as correlation coefficient and regression analysis have been used as the methodology.

The study revealed that Nepal Lever Ltd. is fully equity based and has not been using long-term debt. The Bottlers Nepal Ltd. is free of long term debt because of improved cash flows and effective management. The Sriram Spinning Mills has 66.33% of assets financed with debt and hence there is less flexibility to the owners. The degree of financial leverage analysis of Jyoti Spinning Mills shows the company to gain expected profits. And the Arun Vanaspati has a fluctuating debt equity ratio. Its long-term debt is decreasing and only creditor and only creditor make a small share of finance.

Sharma, (2005) has conducted a research on "Capital Structure of Selected Commercial Banks in Nepal". The objective of the study was to analyze the proportion of total debt and equity capital as well as the supplementary capital adequacy of the commercial banks. The study was based on the financial data of the five years. In that study, financial and statistical tools were used to study the capital structure of commercial banks. In financial tools capital adequacy ratio, core capital ratio, total debt to equity ratio, interest coverage ratio were used. On the other hand, average, standard deviation, coefficient of variation, least square trend analysis was used in statistical tools. Through his study he brought out the conclusion that the banks are using the higher proportion of total debt in their total financing and the outsiders have invested more in total assets of the banks are compared to owner.

Moreover, the Nepalese commercial banks are highly levered and they are taking higher advantage of leverage in owning total assets as result there is lower margin of safety to the outsiders in these institution. Furthermore, he drew the conclusion that the supplementary capital of the banks is sufficient or adequate. However, the contribution of supplementary capital in capital adequacy due to declining tendency of the ratio.

Shrestha, (2006) has conducted a study on "Investment Portfolio of Pokhara Finance Limited." The objective were to analyze various investment sector mobilization and investment trend, liquidity position, profitability position and risk of the company. She has used mainly secondary data covered from 2055/56 to 2060/61. She has used different financial and statistical tools to analyze the investment portfolio. The researcher has revealed that nearly 100% of investment was made on loan and advances than other sectors. POEIL has diversified its loan and advance on four different sectors namely hire purchase loan, housing loan, term loan and fixed deposit loan, investment on all these four sectors were in increasing trend with fluctuation over the study period. Loans loss provision had increasing trend. Loan and advances to total deposit ratio was slightly decreasing trend. She had also found that return on total assets and on investment was fluctuating trend. Return on equity ratio were less consistent and more variable, growth ratio was increasing trend.

Gurung, (2007) has conducted a study on "Financial Performance Analysis of Annapurna Finance Company Limited in the Framework of CAMEL". The basic objective of the study was to analyze the financial performance of AFCL through CAMEL framework. She has used mainly secondary data with covered only five fiscal years from 2058/059 to 2062/063. Some financial and statistical tools and descriptive techniques are applied to evaluate the financial performance of AFCL. She found that core capital adequacy ratio of AFCL was adequate and sufficient, generally above the NRB standard. It indicates that the financial position of the company is sound and strong. The non-performing loan ratio of AFCL were in fluctuating trend during the study period. The earning quality ratio and return on assets (ROA) were generally above the world bank benchmark. EPS of the company was found

decreasing trend. The overall short-term liquidity position of the company was poor than industrial average. Despite the company has maintained more than NRB standard of 8 percent throughout the study period. The cash and vault to total deposit ratio of AFCL was found below than the industrial average in all observed years.

Pokhrel, (2009) has carried out a study on "Comparative Analysis of Capital Structure Management between Himalayan bank Ltd. and Nepal Investment Bank Ltd." The objective of the study was to analyze the proportion of total debt and equity capital as well as the supplementary capital adequacy of the commercial banks. The study was based on the financial data. In that study, financial and statistical tools were used to study the capital structure of commercial banks. In financial tools, capital adequacy ratio, total debt to equity ratio, interest coverage ratio were used on the other hand, average, standard deviation, coefficient of variation, least square trend analysis was used in statistical tools. Through her study she brought out the conclusion that the banks are using the higher proportion of total debt in their total financing and the outsiders have invested more in total assets of the banks are compared to owners. She drew the conclusion that supplementary capital of the banks is sufficient or adequate. However, the banks are trying to decrease the contribution of supplementary capital adequacy due to declining tendency of the ratio.

Dhuju, (2011) has carried out a study on "A Comparative Analysis of Capital Structure of Commercial Banks with reference to Himalayan Bank and Bank of Kathmandu." The basic objective of the study was to analyze the interrelationship of capital structure, profitability position with various important variables such as earning per share, dividend per share and net worth of the commercial banks and to provide suggestions to overcome various issues and gaps. The study has used financial tools such as ratio analysis, EPS analysis, equity capitalization rate, total value calculation etc and statistical tools such as correlation and probable errors. The study concluded that the commercial banks are using high percentage of total debt in raising the assets and all the banks are able to pay the interest. The study suggested that the bank must control total deposit and the bank must also control investment. The bank

needs to reduce its expenses and control fluctuations in the earning per share to improve its market price per share.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology refers to the various sequential steps to be adopted by a researcher in studying a problem with certain object (S) in view. Therefore, through research methodology researcher can get appropriate guidelines and knowledge about the various sequential steps to adopt a systematic analysis. Research methodology is the investigation tools of any certain area and it means clearly observation of certain object.

Research is the process of systematic and in depth study or search any particular topic, subject or area of investigation based by collection presentation and interpretation of relevant details or data. Research is a systematic and organized effort to investigate a specific problem that needs a solution. This process of investigation involves a series of well throughout activities of gathering recording, analysis and interpreting the data with the purpose of finding answers to the problem.

This chapter mainly deals with the research methodology used to ascertain the study objectives. Under this, research design, nature and sources of population and sample and method of data analysis technique have been described.

3.2 Research Design

Research design is outline, plan and strategy of investigator to obtain answer to research question and to control variance. It is a proper framework procedure technique that helps to do research in any field at a minimum cost and time. So, it includes analytical, descriptive and evaluate study of the collected data. The related data with topics are collected through financial statement of the finance and other

available source. Here, different financial and statistical tools are applied to examine the facts about the finance capital and sustainable profitability management.

3.4 Population and Sample

Purpose of this study finance companies will be taken as population. There are all together 79 finance companies established in Nepal. Being this comparative study, AFCL and POFIL select as a sample for this study. For this sampling purpose convenience sampling method will be used.

3.5 Nature and Source of Data

The study is based on secondary data for the purpose of the study, the annual report of AFCL and POFIL are used as the major sources of data. Besides the annual reports of these two finance required data and information is collected from the following sources.

- NRB reports and bulletin and it website.
- Various publications dealing in the subject matters of the study.
- Various articles published in journals, etc.
- Various research report and dissertations
- Nepal stock exchange report.

Formal and informal talks with the senior staff of the company were also helpful to obtain the information of the related problem.

3.5 Data Collection Procedures

Basically the study is based on secondary data. For the purpose of study, annual reports, balance sheet, and other relevant data of the respective finance are used as major source of data. In addition to this NRB publications are collected from the website of NRB other supplementary information, literature review are collected from Western Regional Library Pokhara, Central Library T.U., different journals, magazines as well as published and unpublished reports documented by the concern authorities.

3.6 Data Processing and Analysis

First of all, necessary data were extracted from the published documents and audited financial statements were recorded in master sheet manually. Then, data were entered into the spread sheet to work out the financial ratios and prepare the necessary figure. Finally, different ratios were workout with the help of computer programs like ms-word, ms-excel, corel-draw and spss.

3.7 Data Analysis Tools and Techniques

For the purpose of data analysis, various financial and statistical tools have been used to achieve the objective of the study. The evaluation of data has been carried out to the pattern of data available.

Different tools have been selected according to the nature of data as well as subject matter. The major tool employed for the analysis of the data is ratio analysis, which established the numerical relationship between two variables of the financial statements. Besides financial tools, the statistical tools are also used.

3.7.1 Financial Tools

To make rational interpretations, keeping with the objectives of the study, various analytical financial tool have been used in the study, which is mentioned below:

I. Total Debt to Equity Ratio

The debt to equity ratio indicates the relationship between debt and equity capital. It is used appraise the capital structure of a finance. It measures the relative claim or contribution of creditors and owners against the finances assets of financing. Debts to equity ratio can be determined in different ways. For the purpose of this study following model is used.

$$\text{D.E. Ratio} = \frac{Total\ Debt}{Total\ Equity\ Capital} \times 100$$

Where,

D/E Ratio = Debt to equity ratio

Total debt = long-term debts + current liabilities

Total equity capital = [(Share capital + share premium +general reserve + accumulated profit + other free reserves)]-fictitious assets if any

II. Total Debt to Total Assets

This ratio measure the extent to which borrowed funds have been used to finance the company's assets. It is related to calculate total debt to the total assets of the firm. The total debt included long-term debt and current liabilities. The total assets consist of permanent assets and other assets. It is calculated as:

Debt to Total Assets Ratio = $\frac{Total\ Debt}{Total\ Assets} \times 100$

The lower total debt to total assets ratio indicates that the creditors claim in the total assets of the company is lower than the owner's claims and vice versa.

III. Interest Coverage Ratio

Interest coverage ratio is another tool to appraise the capital structure of levered bank, which is determined by dividing EBIT to interest charges. It reflects the debt servicing capacity of a firm. Thus the ratio is used to analyze the debt servicing capacity of the finance. Following is the expression of interest coverage ratio:

ICR = $\frac{EBIT}{Interest\ Charges} \times 100$

Where,

ICR = Interest Coverage

EBIT = Earning before interest and taxes

IV. Core Capital Adequacy Ratio

Core capital adequacy ratio shows the relationship between the core capital or internal sources and total risk adjusted assets. It is used to measure the adequacy of core capital and finance soundness from very close angle. It is calculated by using the following model.

CCAR = $\frac{Core\ Capital}{Total\ Risk\ Adjusted\ Assets} \times 100$

Where

CCAR = Core Capital Adequacy Ratio

Core Capital = Paid-up-Capital + share premium + non-redeemable preference share + general reserve + cumulative profit

V. Supplementary Capital Adequacy Ratio

Supplementary capital adequacy ratio is the extraction of numerical relationship between supplementary capital and total risk adjusted assets of finance. It measures the proportion of supplementary capital in total risk adjusted assets. Furthermore, it shows the absolute contribution of supplementary capital in capital adequacy of the finance and determined by using the given model,

$$\text{SCAR} = \frac{Supplementary\ Capital}{Total\ \ Risk\ Adjusted\ Assets} \times 100$$

Where,

SCAR = Supplementary Capital Adequacy Ratio

Supplementary Capital = Loan loss provision + exchange equalization reserve + hybrid capital instrument + unsecured sub-ordinate term debt +interest rate fluctuation fund + other free reserves.

VI. Capital Adequacy Ratio

Capital adequacy ratio is the numerical relationship between total capital fund and total risk adjusted assets. It measures the adequacy of capital and financial soundness of finance. Capital adequacy ratio is used to measure the adequacy of capital in the finances. It is worked out by using the following model:

$$\text{CAR} = \frac{Total\ Capital\ Fund}{Total\ Risk\ Adjusted} \times 100$$

Where,

CAR = Capital Adequacy Ratio

Total Capital fund = Core Capital + Supplementary Capital

Total Risk adjusted assets = on-balance sheet risk adjusted assets + off-balance sheet risk adjusted assets.

VII. Total Expenses to Total Income Ratio

The total expenses to total income ratio is the expression of the numerical relationship between total expenses and total incomes of the company. It measures the proportion of total expenses in total revenue. A low or decreasing ratio of expenses to total revenues indicates that a firm is operating efficiently. The increasing ratio of expenses

to total revenues well negatively affects profitability of the firm. Following is the expression of total expenses of total revenue ratio.

Total Expenses to Total Income Ratio = $\frac{Total\ Expenses}{Total\ Income} \times 100$

Where,

Total Expenses = Operation expenses + non-operating expenses + provision for staff bonus + provision for taxation total incomes = operating incomes + non-operating income + write- back of provision for possible loss.

VIII Return on Shareholders' Equity

Shareholders are the owners of the company. To measure the return of shareholders, we use return on share holder's equity. This ratio analyze whether the company has been able to provide higher return on investment of the owners or not. It is calculated as:

Return on Shareholder's Equity = $\frac{Net\ Profit\ After\ \ Tax}{Shareholder's\ Equity} \times 100$

Shareholder's Capital = Paid-up capital + reserves funds and surplus

IX Return on Total Assets (ROA)

Return on total assets ratio measures the profitability of finance that explains a firm to earn satisfactory return on all financial resource invested in the finance assets. The ratio explains net income for each unit of assets. The return on total assets ratio is calculated using the formula below:

Return on Total Assets = $\frac{Net\ Profit\ After\ Tax}{Total\ Assets} \times 100$

Higher ratio indicates efficiency in utilizing its overall resources and vice-versa. From the point of view of judging operational efficiently, rate of return on total assets is more useful measure.

X Net Interest Margin

Net interest margin is the expression of numerical relationship between net interest and net earning assets of a firm. Earning assets are loans and investment on securities made by company for generating interest or fee income. The ratio measures how large a spread between interest revenues and interest costs. It is calculated by

Net Interest Margin= $\frac{Net\ Interest\ Income}{Net\ Earning\ Assets} \times 100$

Where,

Net interest income = interest income-interest expenses

Net earning assets = investment on securities + loans and advance

XI. Price Earning Ratio

P/E ratio, or MPPS divided by EPS, shows how much investors are willing to pay per rupees of reported profits. P/E ratio is higher for firms with high growth prospectus. Low or decreasing price earnings ratio can reflect inefficient in terms of profitability of earning & growth. It is calculated by using the following model:

Price Earning Ratio = $\frac{Market\ Price\ Per\ Share}{Earning\ Per\ Share} \times 100$

If the liquidity, assets management, debt management and profit ability ratios all look good, then, P/E ratio will be higher and stock price will probable be as high as it can be expected.

XII) Weighted Average Cost of Capital (WACC)

Company's cost of capital that is used as the discount rate in the investment evaluation process when using such techniques as net present value and internal rate of return. We can define the cost of capital as the minimum rate of return a firm is required to earn on its investment in order to satisfy investors and to maintain its market value, in other words, it is the invest required rate of return. It is calculated by

Cost of Capital (WACC) (Ko) = Wd Kd + We Ke

Cost of debt (Kd) = $\frac{Interest}{Debt} \times 100\ (1 - T)$

Cost of equity (Ke) = $\frac{ROE}{Equity\ Capital} \times 100$

3.7.2 Statistical Tools

To meet the objectives of the study statistical tools are equally important. It helps us to analyze the relationship between two or more variables. In this research the following statistical tools are used.

The statistical tools that will be used for data analysis are:

- Mean

- Standard Deviation
- Coefficient of Variation
- Coefficient of Correlation
- Probable Error

I. Average

In this study, a simple arithmetic average has been used to find out the average value of different financial ratio of sampled domestic finance companies. The average is expressed as;

$$\bar{x} = \frac{\sum x}{n}$$

Where,

$\bar{x}$ = Mean of the values

$\sum$ = Symbol for summation

n = number of observation

II. Standard Deviation

In this study, standard deviation has been employed to know the dispersion of different ratio of sampled domestic finance companies in absolute term. Standard deviation is determined in following way;

$$\text{S.D. (r)} = \sqrt{\frac{\sum(X-\bar{X})^2}{n}}$$

III. Coefficient of Variation

The coefficient of variation is the ratio of the standard deviation of a distribution to the mean of the distribution. It is a measure of relative risk. The coefficient of variation is the measure of dispersion, comparable across distribution to the mean expressed in percent. In this study, C.V. is calculated in order to know and compare the variability of observed data between the two finances (AFCL and PFCL). Lower C.V. indicates lower level of risk i.e. more consistency of data.

$$\text{C.V.} = \frac{\sigma}{\bar{X}} \times 100$$

IV. Coefficient of Correlation

Correlation coefficient study measures the relation between the variables. The correlation between the different variables of finance is compared to measure the relationship between two variables. The reliability of the value of coefficient of correlation is measured by probable error. The Karl Person coefficient of correlation (r) is given as below:

$$\text{Correlation Coefficient (r)} = \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2}\ \sqrt{N\sum y^2 - (\sum y)^2}}$$

Where,

N = Number of observations

x = Independent Variable

y = Dependent Variable

V. Probable Error

Probable error of the correlation in denoted by P.E. It is applicable for the measurement of testing reliability of the computed value of the correlation coefficient 'r' (Bajracharya 2050: 160). It is used in interpreting whether calculated value of 'r' is significant or not.

The P.E. is defined by:

$$\text{P.E.} = 0.6745 \times \frac{1-r^2}{\sqrt{N}}$$

Where,

r = Correlation Coefficient

N = No. of observation

If $r < \sigma$ P.E., It is insignificant

If $r > \sigma$ P.E., It is significant

3.8 Limitation of the Methodology

Every research has own limitation this study also has following limitation.

The major portion of analysis and interpretation has been done on the basis of the available secondary data and information. So, the consistency of finding and analysis are dependent upon the reliability of secondary data. The data analysis

depends upon the models. To fulfill the objectives of the study, specific model are only employed in such manner.

- Convenience sampling method is adopted to draw the sample, which is not free from criticism. Only two finances are taken as sample, therefore the study may not be able to present in whole scenario.
- For the study, the period has been taken from F.Y. 2062/063 to 2066/067.

3.9 Research Gap

As we know that research means to carry out the real problem on the particular topic. Regarding the objective is selected the topic and study of capital structure management comparative analysis of AFCL and POFIL. Individual finance company related research are done regularly but these is very less research work, thesis and literature are prepared about this research some research are done about performance. It tries to justify the capital structure management adopted by the finances and to relate them on the ground of similar fiscal period. In this thesis, it tries to use current data than former research, presentation is also unique one to clarify the role of capital structure management in the finance company so, the study will be able to prove its own validity in regard of capital structure, capital adequacy and profitability ratio of these two finances.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

4.1 Presentation and Analysis of Data

The purpose of this chapter is to analysis and interpretation of relevant and available data of sampled finance, which has been dealt in order to fulfill the major objectives of the study. The data has been analyzed according to the research methodology to get best result. In this section, as mentioned earlier in the research methodology to obtain the objectives, following evaluative components are presented in the table and figure as below;

4.1.1 Analysis of Paid-up Capital

A part of issued capital which is actually paid by the owners of a finance is called paid-up capital. It is classified under core capital to measure the capital adequacy. It provides an assurance to the depositors and outsiders that the finance continues to run even in the time of financial crisis and adversity. It increases the creditworthiness of the finance paid-up capital induces the paid-up amount of ordinary shares, bonus shares and the amount of non-redeemable preference shares.

Table 4.1

Paid-up Capital (Rs. in Million)

FY	Aggregate	AFCL	POFIL
2062/063	13.2	8	5.2
2063/064	22.3	16.8	6
2064/065	26.16	20.16	6
2065/066	50.21	26.21	24
2066/067	101.63	70.473	31.2
Total		141.60	72.4

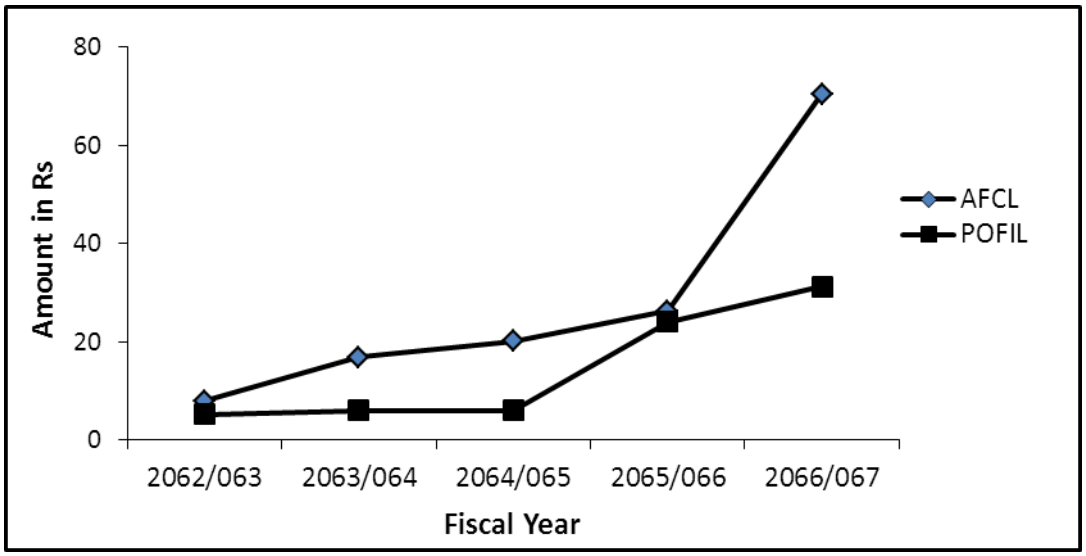
Average ($\bar{X}$)		28.32	14.48
S.D. (σ)		21.86	10.96
CV		0.772	0.756

Source: Annual Report, AFCL and POFIL

Table 4.1 presents the amount of paid-up capital of AFCL and POFIL for the period from F.Y. 2062/063 to 2066/067. In the table, the figures are presented, as the amount of paid-up capital of AFCL and POFIL are increasing trend from base year of the study period up to the final year of the study period. The average paid-up capital is Rs. 28.32 million and Rs. 14.48 million of AFCL and POFIL respectively. The variation of relative term are 21.86 and 0.772 of AFCL and 10.96 and 0.756 of POFIL. The higher of CV indicates the greater dispersion on paid-up capital.

Figure 4.1

Trend Analysis of Paid up Capital of AFCL and POFIL



which reflects the amount of paid-up capital of AFCL Rs. 80, Rs. 168, Rs. 201.6, Rs. 262.1, Rs. 704.3 million and Rs. 52, Rs. 60, Rs. 60, Rs. 240 Rs. 312 millions of POFIL in F.Y. 2062/063 to F.Y. 2066/067 respectively. Furthermore, it shows the paid-up capital of AFCL is increasing trend on all over study period. Here, increasing paid-up capital of AFCL indicates the high risk in absolute of CV and average paid-up capital values are 218.80, 77.30 and 283.20 respectively. Similarly, POFIL paid-up capital shows increasing trend on first two year, constant in third year and again

increasing trend on all over the study period. POFIL indicates the high risk in absolute measure of standard deviation, relative measure of CV and average paid-up capital values as 109.60, 75.70 and 144.80 respectively.

4.1.2 Trend Analysis of Debt Capital

Debt capital is the capital, usually money, raised through issuing bond. Debt is the creditorship source of financing. Fixed interest is paid for the supplies of the debt capital. Due to tax advantage, the cost of debt capital will be low but it is little riskier.

If the firm fails to pay interest, the creditors may put legal pressure to liquidate the firm. But if the proportion of debt used by the firm is appropriate and its cash flow position and earning is sufficient to meet the fixed charge obligation, the possibility of liquidation do not exist.

Table 4.2
Debt Capital (Rs. in Million)

FY	Aggregate	AFCL	POFIL
2062/063	1823.21	1020.04	803.17
2063/064	2328.08	1358.61	969.47
2064/065	2941.54	1831.63	1109.91
2065/066	3654.17	2422.26	1231.91
2066/067	4459.71	3294.40	1165.31
Total		9926.94	5279.77
Average ($\bar{X}$)		1985.39	1055.96
S.D. (σ)		806.57	153.12
CV		40.63	14.50

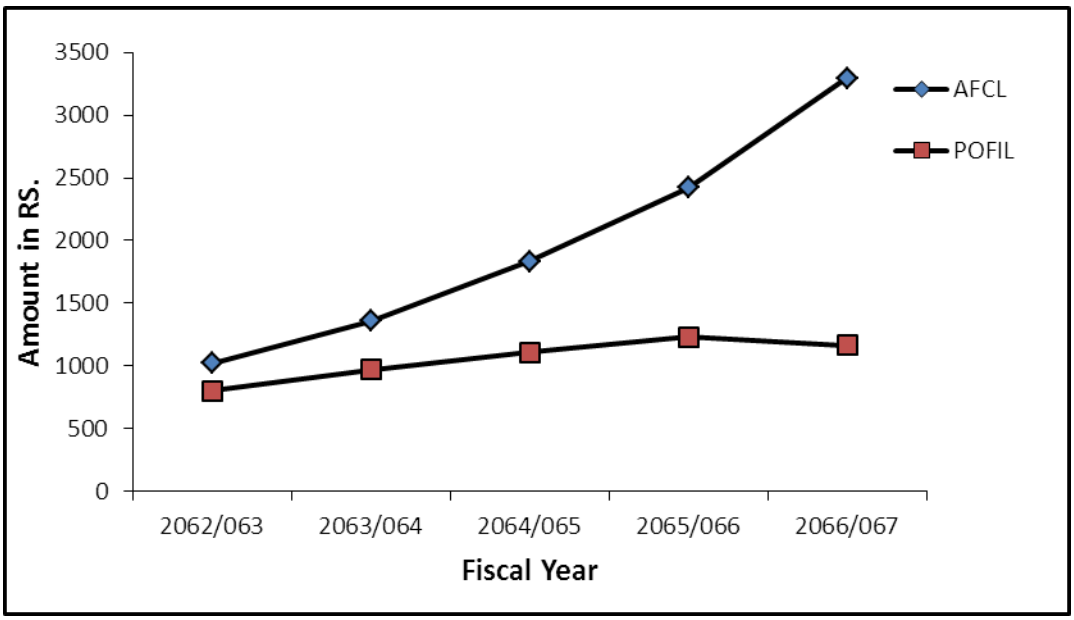
Source: Annual Report, AFCL and POFIL

Table 4.2 present the amount of debt capital of AFCL and POFIL for the period from F.Y. 2062/063 to 2066/067. In the table, the figures presented as the amount of debt

capital of AFCL are increasing trend from the base year of the study period up to the final year of the study period POFIL also in increasing trend from base year of the study period but in last year of study period it is decrease. The average debt capital is RS. 1985.39 million and 1055.96 million of AFCL and POFIL respectively. The variation of relative term are 806.57, 40.63% and 153.12, 14.20%.

Figure 4.2

Debt Capital Analysis of AFCL & POFIL



The amount of debt capital of AFCL and POFIL is mentioned in the figure 4.2, which reflects the amount of debt capital Rs. 1020.04, Rs. 1358.61, Rs. 1831.63, Rs. 2422.91, Rs. 1165.31 millions respectively. It shows the debt capital of AFCL and POFIL is increasing trend on all over the study period expect in 2066/067 of POFIL. The variation in absolute and relative terms of AFCL are 806.57 and 40.63% which are greater than 153.12 and 14.50% of POFIL.

4.1.3 Trend Analysis of Equity Capital

Equity capital is capital raised from owners in the company. Owners can chase to set equity in the company. In the form of stock, to investors. This is usually done

through a direct offering to the public or through an underwriter like an investment bank.

Table 4.3

Equity Capital (Rs. in Million)

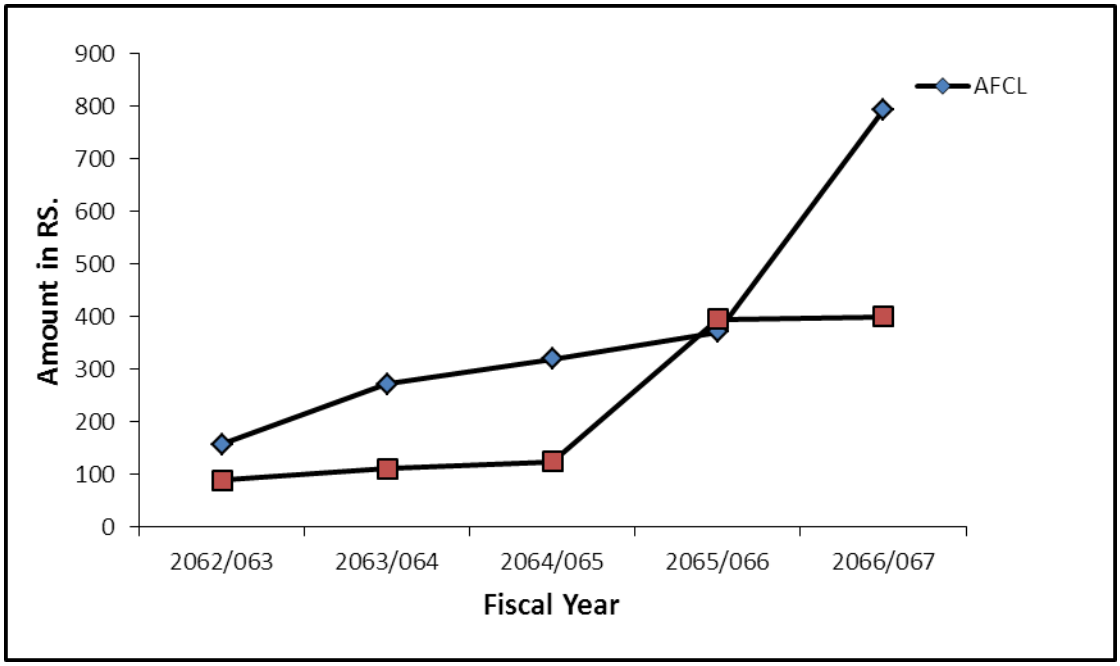
FY	Aggregate	AFCL	POFIL
2062/063	243.96	156.15	87.81
2063/064	381.58	271.76	109.82
2064/065	443.96	319.72	124.24
2065/066	765	370.44	394.56
2066/067	1194.60	794.79	399.81
Total		1912.86	1116.24
Average ($\bar{X}$)		382.57	223.25
S.D. (σ)		218	142.50
CV		57%	63.83%

Source: Annual Report, AFCL and POFIL

Table 4.3 presents the amount of equity capital of AFCL and POFIL for the period from F.Y. 2062/063 to 2066/067. In the table, the figures are presented as the amount of equity capital of AFCL and POFIL are increasing trend from base year of the study period up to the final year of the study period. The average equity capital is Rs. 382.57 million and Rs. 223.25 million of AFCL and POFIL respectively. The variation of relative term are 218 and 57% of AFCL and 142.50 and 63.83% of POFIL.

Figure 4.3

Equity Capital Analysis of AFCL & POFIL



The amount of equity capital of AFCL and POFIL is mentioned in the figure 4.3, which reflects the amount of equity capital RS. 156.15, Rs. 271.76, Rs. 319.72, Rs. 370.44, Rs. 794.79 and Rs. 87.81, Rs. 109.82, Rs. 124.24, Rs. 394.56, Rs. 399.81 million in F.Y. 2062/063 to F.Y. 2066/067 respectively. It shows the equity capital of AFCL and POFIL is increasing trend or all over study period. The variation in absolute and relative terms of AFCL and POFIL are 218, 57% and 142.50 and 63.83% respectively. The average equity capital of AFCL and POFIL are 382.57 and 223.25 respectively.

4.1.4 Analysis of Total Debt to Equity Ratio

D/E ratio, or total debt by total equity capital is a financial tool to evaluate the capital/or financial structure of a firm. The ratio shows the relative contribute of creditors (outsider's claims) and owners of finance in its financing. It also reflects the relative claims of creditors and shareholders against the assets of a finance. D/E ratio has important implications from the viewpoint of creditors, owners and the firm itself. The creditors prefer low ratio because it gives the sufficient protection against losses

in all the time, more specifically, in the event of liquidation. Similarly, the owners prefer a high D/E ratio because the higher use of debt magnifies their earnings and protection from dilution of control over the firm, which is the golden chance for owners to maximize their value and return by taking the advantage of leverage. Likewise, high D/E ratio is a bad news for outsiders because of the higher risk in their investment and lower margin of safety.

Higher D/E ratio indicates that the outsiders have invested more in the firm than the owners. Thus, creditors will loss more than the owners in the times of financially distress. On the otherside, a low D/E ratio shows the lower contribution of outsiders to the total financing of a firm. It reflects that the firm is unable to take the advantage associated with the financial leverage.

Table 4.4

Debt to Equity Ratio (In percent)

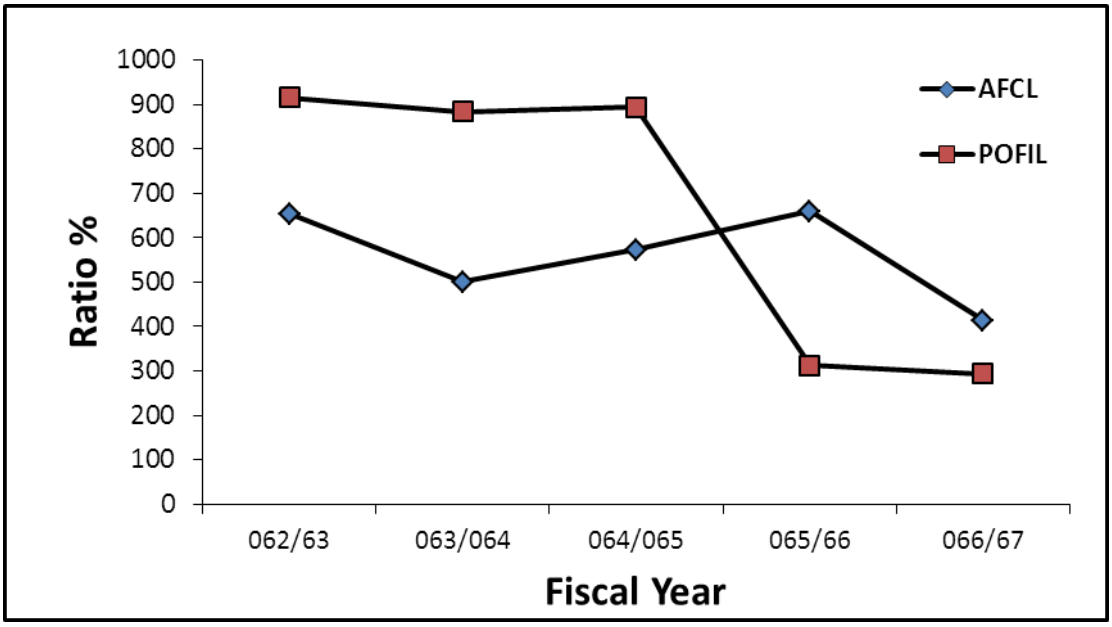
Particular/F.Y.	062/63	063/064	064/065	065/66	066/67	AV	SD	CV
AFCL	653	500	573	659	414	559.8	93.31	16.67
POFIL	915	883	893	312	294	659.4	291	44.13

Work out on Appendix 4

D/E ratio is widely used to measure the relative proportion of total debt and equity as shown in the table 4.4 the debt to equity ratio of AFCL is decreasing from 653 base year up to 2063/064 500 thereafter it increases to 573 in F.Y. 2064/065 and 659 in F.Y. 2065/66 and again decrease to 414 in F.Y. 2066/067. The average debt to equity ratio 559.8 absolute and relative measured are 93.31 and 16.67% respectively. Similarly, the debt to equity of POFIL is decreasing from base year 915 upto F.Y. 2063/064 883, there afte it increases to 893 in F.Y. 2064/065, again decrease to 312 and 294 in F.Y. 2065/066 and 2066/67 respectively. The average debt to equity ratio 659.4 absolute and relative measures are as 291 and 44.13% respectively.

Figure 4.4

Debt to Equity Ratio



The debt to equity ratio is fluctuating over the study period in both finance. The debt to equity ratio of AFCL and POFIL shows in the figure 4.4, which are 653, 500, 573, 659, 659, 414 and 915, 883, 893, 312, 294 over the study period respectively. It can be clear that the debt to equity ratio of AFCL is slightly fluctuating trend, it is moving down from the base year up to the F.y. 2063/064 and it increase in F.Y. 2064/065 and 2065/066 and it decrease in the final year of the study period. Similarly, in case of POFIL and debt to equity decrease from base year to F.Y. 2063/064, increase in F.Y. 2064/065 again decrease in last two year. Low D/E ratio is food news for outsides because of the lower risk in their investment and higher margin of safety. Higher ratio indicates more risky to the outsiders. The variation in absolute and relative terms of POFIL are 291 and 44.13%, which are greater than 93.31 and 16.67 of AFCL respective which indicates AFCL has seems more consistency in comparison of POFIL.

4.1.5 Analysis of Debt to Total Assets Ratio

Debt to total assets ratio expresses the relationship between creditors fund and total assets. It is a leverage ratio, which is generally called the debt ratio. This type of capital structure ratio is a variant of debt equity ratio calculating debt to total assets is one calculation approach of the debt to capital ratio. Debt included all loans and the total assets include all types of assets of the firm, it measures the percentage of total funds provided by creditors. This ratio can be calculated by simply dividing total debt by the total assets of the firm.

Table 4.5

Debt to Total Assets (Ratio) (In percent)

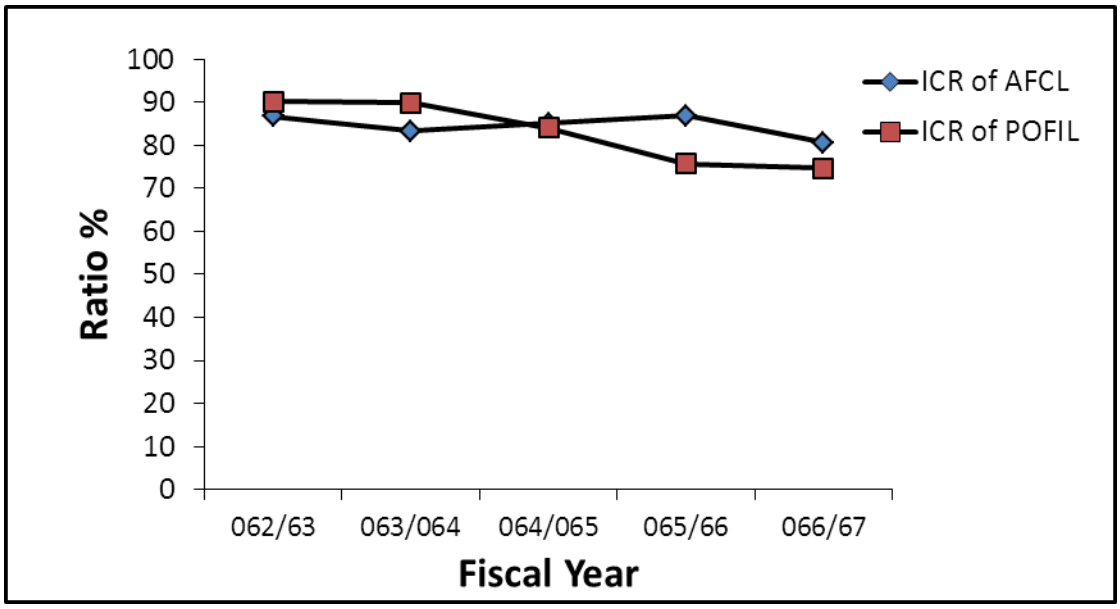
Particular/F.Y.	062/63	063/064	064/065	065/66	066/67	AV	SD	CV
AFCL	86.72	83.33	85.14	86.83	80.56	84.52	2.35	2.78
POFIL	90.14	89.83	84.10	75.74	74.65	84.10	7.26	8.63

Source: Annual Reports

D/TA ratio is used to measure the relative proportion of total debt and total assets. As shown in the table 4.5, the debt to total assets ratio of AFCL in decreasing from base year up to 2063/064 there after it increases for next two year and again decrease in Final year. The average debt to total assets ratio 84.52 absolute and relative measures are 2.35 and 2.78%. The debt to total assets of POFIL is decreasing trend from base year to final year of the study period. The average debt to assets ratio 84.10 absolute and relative measure are as 7.26 and 8.63% respectively.

Figure 4.5

Debt to total Assets Ratio



The debt to total assets of AFCL is fluctuating over the study period and POFIL is decreasing trend. The debt to total assets ratio AFCL and POFIL shows in the figure 4.5, which are 86.72, 85.14, 86.83, 80.56 and 90.14, 89.83, 84.10, 75.74, 74.65 over the study period respectively. It can be clear that the debt to total assets ratio of AFCL is slightly fluctuating trend, it is moving down from the base year up to the F.Y. 2063/064 and it increase in F.Y. 2064/065 and 2065/066 and again decrease in the final year of the study period. In case of POFIL the debt to total assets in decreasing trend for all the study period. Low debt to total assets ratio indicates that the creditors claims in the total assets of the company is lower than the owner's. The variation in absolute and relative terms of POFIL are 7.26 and 8.63% which are greater than 2.35 and 2.78% of AFCL respective which indicates AFCL has seems more consistency in comparison of POFIL.

4.1.6 Analysis of Debt Servicing Capacity

Interest coverage ratio (ICR) is used to analyze the debt servicing capacity of finance. ICR is calculated dividing EBIT by interest charges to be paid. The ratio shows the

numbers of times the interest charges are covered by the earning of times the interest charges are covered by the earning that are normally available for payment. The higher ratio is desired from the view point of outsiders and other. The large ICR shows the greater ability of the firm to handle the fixed charges and more assurance for payment of interest to the creditors; lower value of the ICR indicates the lower debt servicing capacity. A low ratio is an alert signal that the firm is using excessive debt and does not have the capacity to service the debt properly. Similarly, a high ratio reflects the unused debt capacity or the firm is missing the opportunity to take the advantage of financial leverage.

Table 4.6

Interest Coverage Ratio (In times)

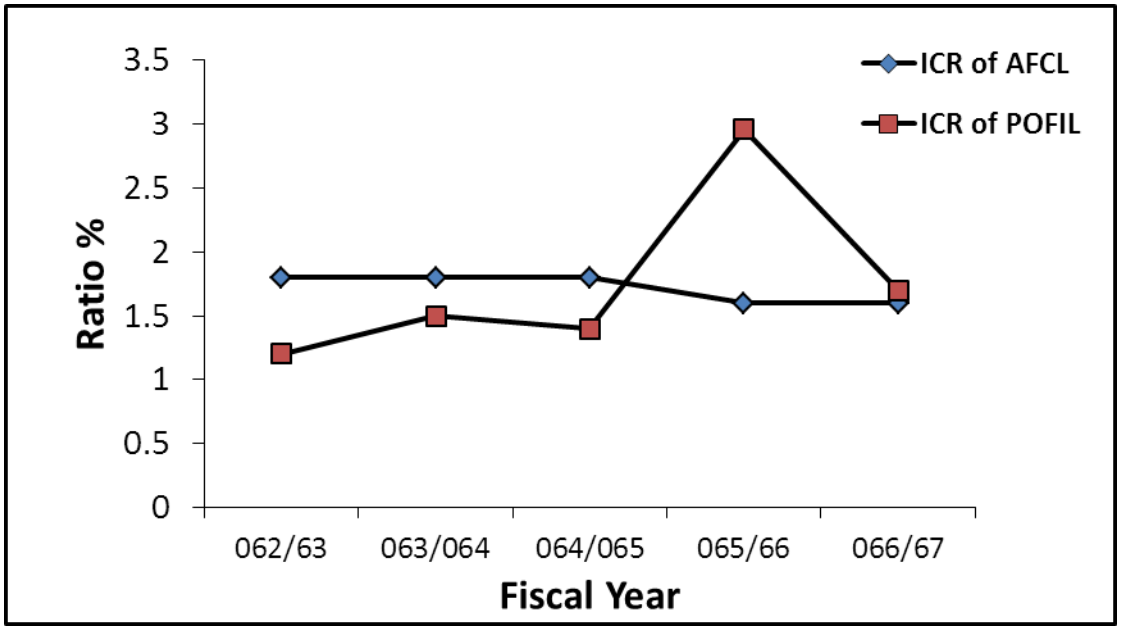
Particular/F.Y.	**062/63**	**063/064**	**064/065**	**065/66**	**066/67**	**AV**	**SD**	**CV**
ICR of AFCL	1.8	1.8	1.8	1.6	1.6	1.72	0.10	0.058
ICR of POFIL	1.2	1.5	1.4	2.96	1.7	1.75	0.63	0.36

Source: Annual Reports

Table 4.6 presents the ICR of AFCL and POFIL period from F.Y. 2062/063 to 2066/067. The figure presented in the table reveal that the ICR of AFCL is constant for 1st, 2nd and 3rdyear on 1.8, and it decreases on 1.6 for next two year. AFCL has an average ratio of 1.72 times, absolute measure of 0.10 and 0.058. Similarly, ICR of POFIL is increasing trend for 1st and 2nd year, and it decreases of 1.4. In F.Y. 2064/065, again increase of 2.96 in 2065/066 and decrease of 1.7 in F.Y. 2066/067. POFIL has an average ratio of 1.75 times, absolute measure of 0.63 and relative measure of 0.36.

Figure 4.6

Interest Coverage Ratio (ICR)



As shown in the figure, ICR of both finances found by comparing the average value standard deviation and CV, POFIL has found satisfactory and look good due to higher average ICR (i.e. 1.75>1.72) but AFCL look good due to low standard deviation (i.e. 0.10<0.63) and low CV (i.e. 0.058<0.36), which indicates more consistency for the management of ICR.

4.1.7 Capital Adequacy Ratio

Financial strength is measure by capital adequacy of (Bank and Financial Institution) B & FI's. It provides a custion against the risk of failure, adequacy capital reduces firm's risk, to support its risks assets in accordance with the risk. Weighted capital ratio, NRB determines the capital adequacy ratio of all banks and non-bank financial institutions in Nepal. NRB concerned with this because some financial institutions do not hold enough capital and have increased capital requirement. If the firm hold more capital, they can more easily absorb potential looses and are more likely to survive. More over it reduces the likelihood of failure. The firm with higher capital ratio is therefore assigned a higher capital adequacy rating.

4.1.7.1 Analysis of Core Capital Adequacy Ratio (CCAR)

Core capital divided by total risk adjusted assets (CCAR), which measures the adequacy of internal sources or shareholders funds to support the financial activities. It reflects the financial strength and soundness of financial institution. Core capital is the primary capital, also known as the tier I capital. It includes the paid-up capital, share premium, non redeemable preference share, general reserves, retained earnings, proposed bonus share and good will, fictitious assets deductible if any (Baral, 2005, P. 26).

Higher value of the ratio above the NRB standard shows the adequacy of internal source and higher security to creditors and depositors and vice-versa. NRB has provided the minimum standard of CCAR in order to stabilize the capital and assets of finances. They are required to maintain the CCAR of 6%, 5.5%, 5.5%, 5.5% , 5.5% in the F.Y. 2062/063 to 2066/067 respectively.

Table 4.7

Core Capital Adequacy Ratio (In Percent)

Particular/F.Y.	062/63	063/064	064/065	065/66	066/67	AV	SD	CV
CCAR of AFCL	14.27	17.61	15.83	13.54	25.63	17.38	4.36	0.25
CCAR of POFIL	11.75	10.15	10.49	30.82	28.10	18.26	9.20	0.50
NRB Standard	6	5.5	5.5	5.5	5.5			
CCAR Excess /shortage in AFCL	8.27	12.11	10.33	8.04	20.13			
CCAR Excess/Shortage in POFIL	5.75	4.65	4.99	25.32	22.60			

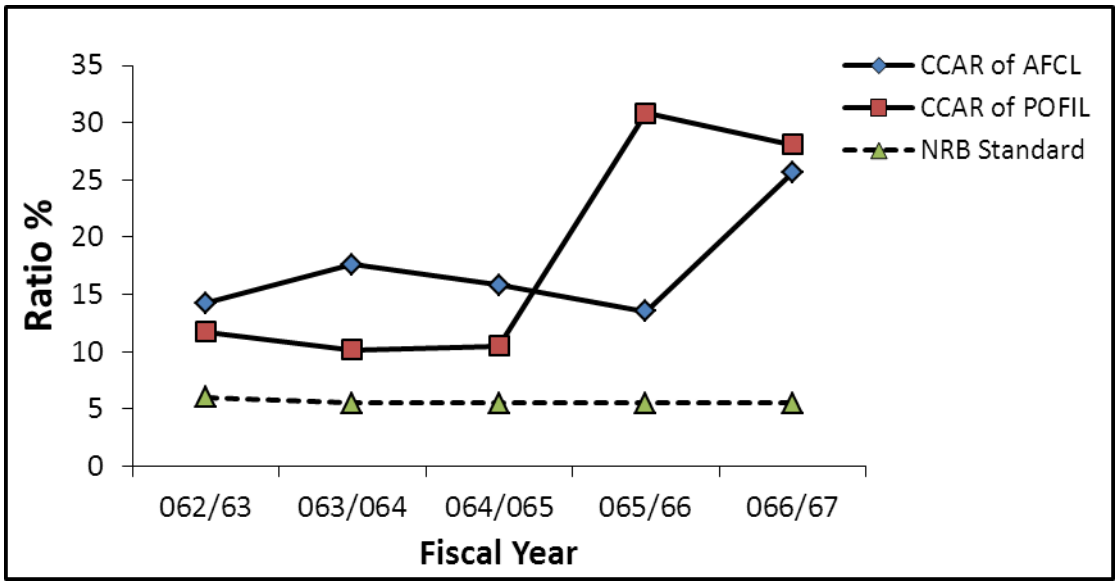
Source: Annual Reports

The data given in the table 4.7, exhibits that CCAR of AFCL is minimum of 13.54 in F.Y. 2065/066 and maximum of 25.63 in F.Y. 2066/067 with average 17.38%. The ratios are 14.23, 17.61, 15.83, 13.54, 25.63 in F.Y. 2062/063 to 2066/067 respectively.

And an absolute measure in standard deviation of 4.36 and relative measure in CV of 0.25. Similarly, CCAR of POFIL is minimus of 10.15 in F.Y. 2063/064 and maximum of 30.82 in F.Y. 2065/066 with an average ratio of 18.26. The actual ratios are 11.75, 10.15, 10.49, 30.82, 28.10 in F.Y. 2062/063 to 2066/067 respectively. And an absolute measure in standard deviation of 9.20 and relative measure in CV of 0.50.

Figure 4.7

Comparing core Capital Adequacy Ratio with NRB Standard



The observed value of CCAR of AFCL and POFIL is clearly shown with NRB standard in figure 4.7. In which the CCAR of AFCL and POFIL compares with the NRB standard. As compared to NRB standard the CCAR of AFCL and POFIL are excess throughout the study period. Moreover, it is clearly shown that the finances have met the NRB standard in all fiscal year. It indicates that the both finances are applying adequacy amount of inter source with significant CCAR throughout the study period. The CCAR of POFIL is fluctuating trend over the study period having the absolute measure of standard deviation of 9.20 and relative measure of CV of 0.50. In the case of AFCL is increasing trend in last three year of the study period. So, that, the absolute risk measure of standard deviation of 4.36 and relave measure in CV of 0.25 represents the more favorable and consistency for smooth operation of the finance and in the management of CCAR.

4.1.7.2 Analysis of Supplementary Capital Adequacy Ratio

Supplementary capital is the secondary capital, also known as tier II capital. Supplementary capital means the amount of capital. Supplementary capital means the amount of capital that is transferred in free reserve and collected by using the hybrid instruments. General loan loss provision, exchange equalization reserve, interest spread reserve, assets revolution reserve, subordinate term and other free reserve (Baral, 2005, P. 43). High value of SCAR means the higher proportion of supplementary capital in total risk adjusted assets and large portion of supplementary. Capital in capital ratio and vice-versa. As per NRB unified directive for B & FI's fixed out the maximum limit of supplementary capital ratio, it can be indicate that in the capital adequacy ratio is not more than CCAR of respective finances in each year.

Table 4.8

Supplementary Capital Adequacy Ratio (in percent)

Particular/F.Y.	**062/63**	**063/064**	**064/065**	**065/66**	**066/67**	**AV**	**SD**	**CV**
SCAR of AFCL	1.37	1.25	1.19	1.03	0.97	1.16	0.15	0.13
SCARR of POFIL	0.87	0.65	0.94	2.08	0.93	1.10	0.50	0.45
NRB Standard (≤ CCAR in term of AFCL)	14.27	17.61	15.83	13.54	25.63			
NRB Standard (≤ CCAR in term of POFIL)	11.75	10.15	10.49	30.82	28.10			
NRB Standard Excess/Shortage in AFCL	12.9	16.36	14.64	12.51	24.66			
NRB Standard Excess/Shortage in POFIL	10.88	9.5	9.55	10.43	23.73			

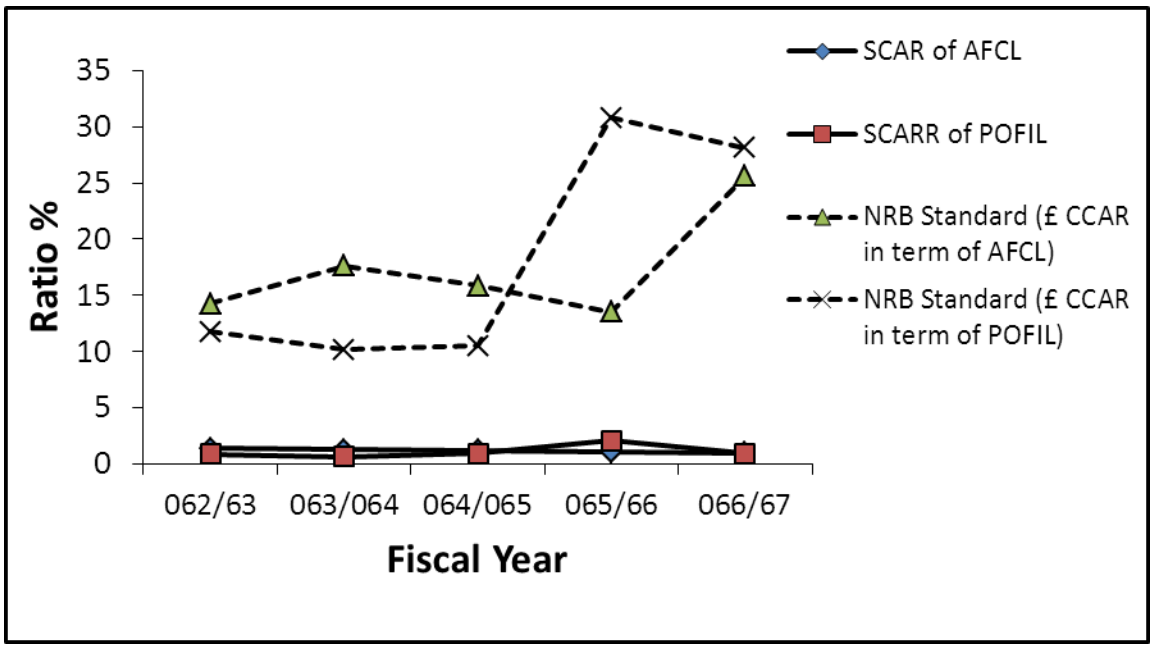
Source: Annual Reports

The data presented in the table 4.8 shows the SCAR of AFCL and POFIL are 1.37, 1.25, 1.19, 1.03, 0.97 and 0.87, 0.65, 0.94, 2.08, 0.93 in F.Y. 2062/063 to 2066/067

respectively. The SCAR of AFCL is decreasing trend from the base year up to study period with average 1.16. In the case of POFIL, the SCAR is decreasing trend for first two year and increasing trend next two year and again decreasing in F.Y. 2066/067 with 1.10 average ratio. In addition, AFCL has 0.15 risk on absolute measure and 0.13 measure of CV. Thus, lower level of CV indicates more consistency of finance operation. But,POFIL has 0.50 risk on absolute measure and 0.45 in relative measure of CV, more CV indicates less consistency for smooth operation of the finance in terms of management of SCAR in comparison of AFCL.

Figure 4.8

Comparing Supplementary Capital Adequacy Ratio with NRB Standard



The observed values of SCAR of AFCL and POFIL are shown with NRB standard in figure 4.8. In the figure, it is clearly shown that the both finances AFCL and POFIL have maintained the SCAR as per the NRB standard during the study period. It indicates both finance company are running with the adequate capital in all year during the study period.

4.1.7.3 Analysis of Capital Adequacy Ratio

The total capital is the sum of Tier I Capital and Tier II Capital, which represents the total amount of invested by the shareholder, creditors and the amount collected from the various free reserves maintain by the finance CAR below than minimum requirement of NRB shows that the lower in its internal sources, comparatively weak position financially and lower level of security to depositors. CAR measure the adequacy of capital and financial soundness of a finance. NRB has set the standard of CAR as 11%, 11%,11%,11%,11%, in the F.Y. 2062/063 to 2066/067 respectively.

Table 4.9

Capital Adequacy Ratio (in Percent)

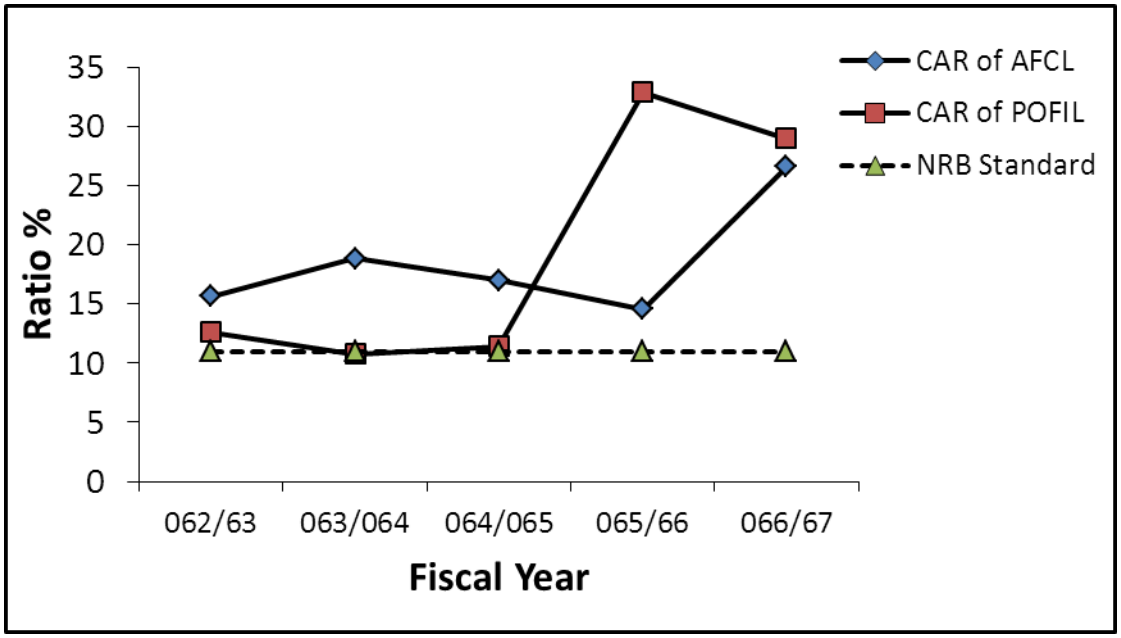
Particular/F.Y.	**062/63**	**063/064**	**064/065**	**065/66**	**066/67**	**AV**	**SD**	**CV**
CAR of AFCL	15.64	18.85	17.62	14.57	26.61	18.54	4.30	0.23
CAR of POFIL	12.62	10.80	11.43	32.90	29.01	19.35	9.57	0.49
NRB Standard	11	11	11	11	11			
CCAR Excess/shortage in AFCL	4.62	7.85	6.02	3.57	15.61			
CCAR Excess /Shortage in POFIL	1.62	(0.2)	0.43	21.9	18.01			

Source: Annual Reports

Table 4.6 clearly shows the observed values of AFCL and POFIL during the study period and minimum requirement of CAR set by NRB. In this table CAR of AFCL and POFIL are 15.64%, 18.85%, 17.02, 14.57, 26.61 and 12.62, 10.80, 11.43, 32.90, 29.01 in CAR F.Y. 2062/063 to 2066/067 respectively. In the case of POFIL, CAR is not maintain the NRB standard in F.Y. 2063/64 and other four years CAR with in NRB standard with average ratio 19.35%. And, the CAR of AFCL are within NRB standard with average ratio 18.54. The risk on absolute measure and measure of CV are 4.30, 9.57 and 0.23, 0.49 of AFCL and POFIL respectively.

Figure 4.9

Comparing Capital Adequacy Ratio with NRB Standard



In the figure 47, as shown value of CAR of AFCL and POFIL. In the case of AFCL, the figure exhibits that the finance met NRB standard. In the case of POFIL have met NRB standard in each fiscal year expect in F.Y. 2063/064.

4.1.8 Profitability Ratio

Profitability ratio is regarded as a control, measure of the earning power and operating efficiency of a firm. This ratio measures the overall efficiency of the company and these ratios are compared with the past period ratio of the firm a given a standard to whether the company is improving or not profitability of two finances is analyzed on behalf of the long-term financial healthiness. Profitability depends upon earnings and expenditures. Minimization of expenditure and maximization of return is the major aspect of profitability to sustain the business smoothly.

4.1.8.1 Total Expenses to Total Income Ratio

Profitability depends upon the earning and expenditure. Generally, finance company earned incomes from interest on loans and advance, commission, fees and discounts and other miscellaneous income. Likewise, the major components of expenses are

interest on deposits staff salary, provision for bonus, allowances, provident fund and other operating expenses like rent, water and electricity, fuel expenses, and other operating expenses and other expenses as loss on sale of assets, loss on sale of investments, provision for possible losses and provision for income tax etc. low level of management. The ratio of total expenses to total income is used as a proxy measure of the quality of management. Low or decreasing ratio of expenses to total income indicates efficient profitability of the finance. So the management always tries to maximizing earning and minimizing the expenses. Table 4.7 presents the total expenses to total incomes ratio of AFCL and POFIL

Table 4.10

Total Expenses to Total Income Ratio (In Percent)

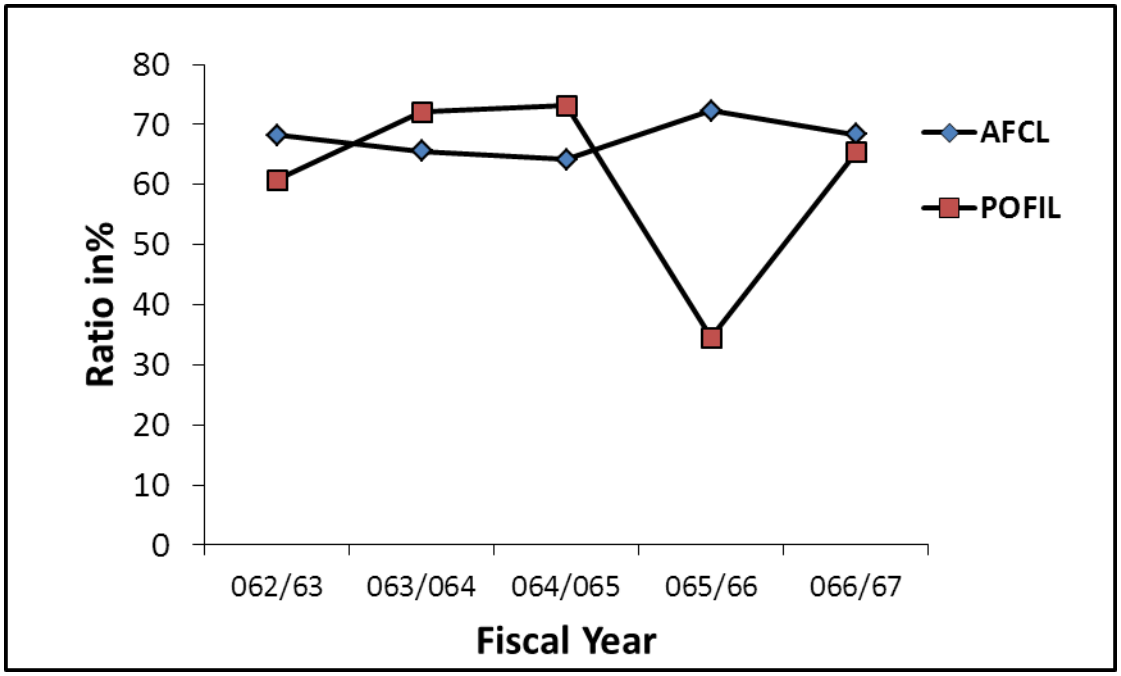
Particular/F.Y.	**062/63**	**063/064**	**064/065**	**065/66**	**066/67**	**AV**	**SD**	**CV**
AFCL	68.26	65.58	64.17	72.25	68.33	67.72	2.81	6.04
POFIL	60.80	72.10	73.10	34.54	65.30	61.17	14.06	0.23

Source: Annual Reports

The data shown in the table 4.10 exhibits that the ratio of total expenses to total income of AFCL and POFIL. The observed values of AFCL decreasing trend from F.Y. 2062/063 to 2064/065, increase in F.Y. 2065/066, and again decrease in F.Y. 2066/067. The maximum ratio of AFCL of 72.25 in F.Y. 2065/066 and minimum ratio of 64.17 in F.Y. 2064/065 with average ratio 67.72 risk in absolute measure of 2.81 and relative measure on CV of 0.04. Similarly, the observed values of POFIL are increasing trend from 2062/063 to 2064/065, decrease in F.Y. 2065/066 and again increase in F.Y. 2066/067. The maximum ratio of 73.10 in F.Y. 2064/065 and minimum ratio of 34.54 in F.Y. 2065/066 with average ratio 61.17 risk in absolute measure of 14.06 and relative measure on CV of 0.23

Figure 4.10

Total Expenses to Total Income Ratio



The observed value of total expenses to total income ratio of AFCL and POFIL is shown in the figure 4.10. The lower level of CV, 0.04 in AFCL indicates more consistent and uniformity. But the higher level of relative measure of CV, 0.23 in POFIL indicates not consistent and non-uniformity.

4.1.8.2 Return on Equity (ROE)

ROE is the one of the profitability ratio that the relationship between the net income and total shareholder equity capital ,which states how well the firm has used the resources of the owners to earn the profit higher ratio indicates the more efficiency of management on using shareholders fund and firm's ability of generating profit per rupee of their funds. Table 4.11 presents the ROE of AFCL and POFIL for the period between F.Y. 2062/063 to 2066/067.

Table 4.11

Return on Equity Ratio (In Percent)

F.Y. / Particular	062/63	063/064	064/065	065/66	066/67	AV	SD	CV
ROA of AFCL	38.60	22.25	25.37	19.88	12.79	23.66	8.65	0.37
ROA of POFIL	4.57	23.34	24.04	37.34	10.40	19.94	11.45	0.58

Source: Annual Reports

The figure presented in the table revels the ROE of AFCL decreasing trend in first two year, increase in F.Y. 2064/065, again decreased in last two year of the study period. The highest ratio is 25.37 in F.Y. 2064/065 and the lowest ratio of 12.19 in F.Y. 2066/067 of AFCL. The average ratio of AFCL is 23.66 absolute measure of standard deviation is 8.65 and relative measure of CV is 0.37.

Similarly, ROE of POFIL has been increasing trend for first four year and decrease in last year of the study period. The minimum ratio is 10.40 in F.Y. 2066/067 and maximum ratio 37.34 in F.Y. 2065/066 of POFIL. The average ratio of POFIL is 19.94 absolute measures on standard deviation is 11.48 and relative measure on CV is 0.58. The higher level of CV, 0.58 in POFIL indicates non consistent and uniformity.

Figure 4.11

Return on Equity (ROE)

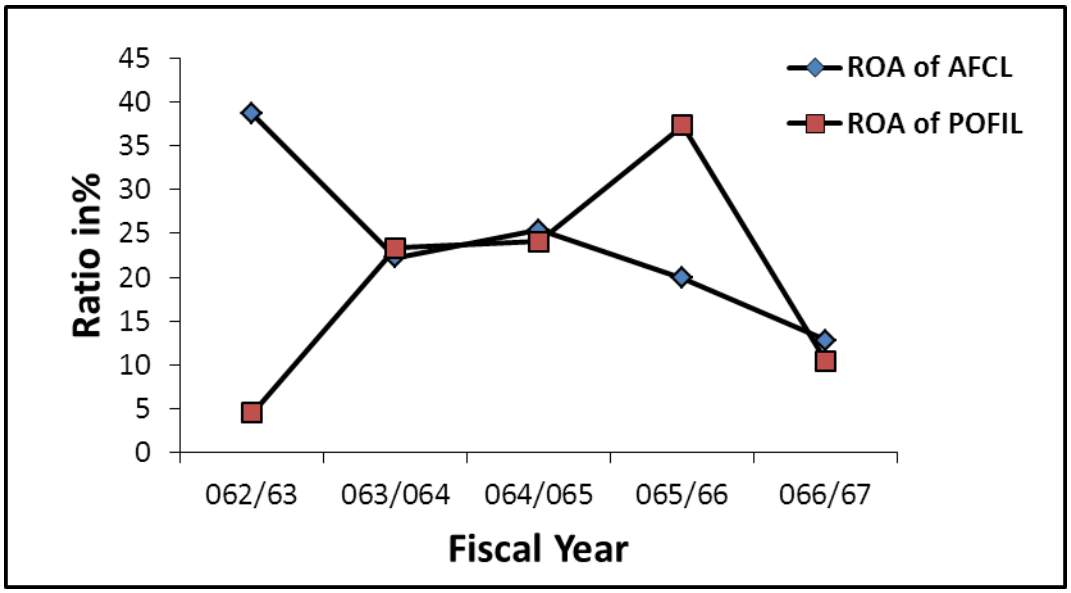


Figure 4.9 shows the observed value of AFCL and POFIL during the study period. It reflects the ROE of both finances are fluctuating trend. Comparatively, the ROE of AFCL seems favorable and consistency being higher level of average return, lower level of absolute and relative risk.

4.1.8.3 Return of Assets (ROA)

This is the ratio which indicates the position of profit over the assets. ROA measures the profitability of finances that explains the return on all financial resources invested in the finances assets are satisfactory or not. Financial institutions make investment over different types of assets in order to run daily operations. These types of assets are long run assets. The ratio explains net income for each unit of assets, indicates overall effectiveness of management in generating profits with its available assets. ROA helps to analyze strength of the company. Higher ratio indicates total assets are effectively cased. Table 4.9 exhibits the ROA of aFCL and POFIL for the period between F.Y. 2062/063 to 2066/067.

Table 4.12

Return on Assets Ratio (In percent)

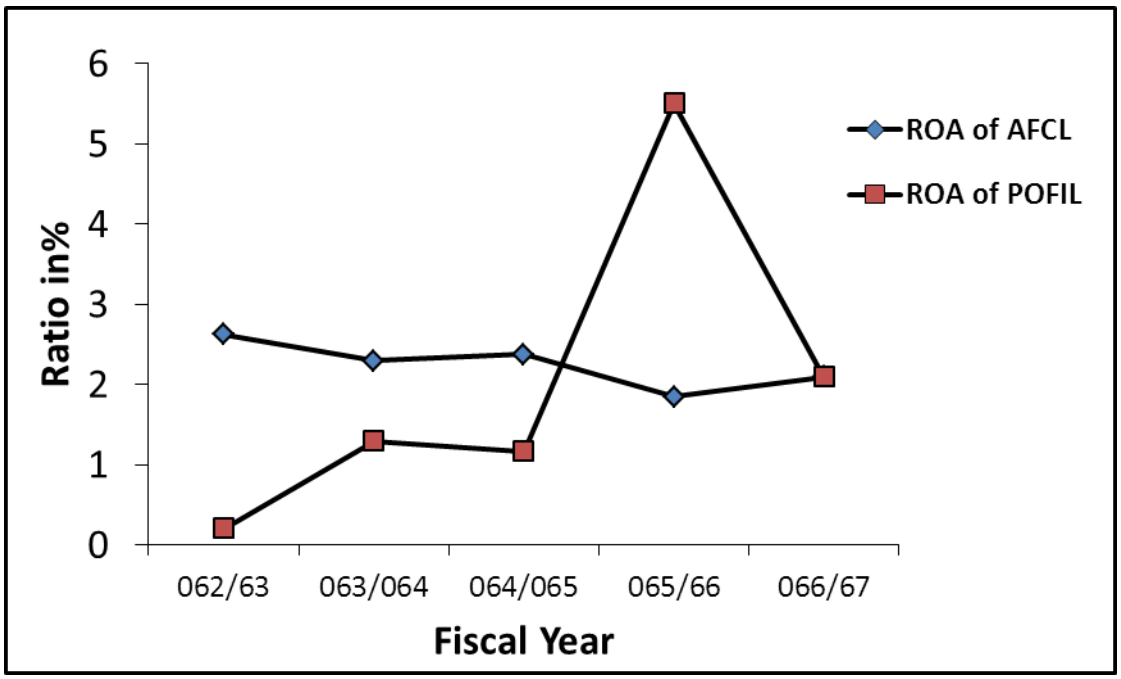
Particular/F.Y.	062/63	063/064	064/065	065/66	066/67	AV	SD	CV
ROA of AFCL	2.63	2.30	2.38	1.85	2.10	2.25	0.26	0.12
ROA of POFIL	0.21	1.30	1.17	5.51	2.10	2.10	1.83	0.87

Source: Annual Reports

The figure presented in the table 4.12, which indicates the value are fluctuating trend over the study period. The average return 2.25 absolute measure on CV 0.12 indicates less consistency on the ratio of AFCL. Similarly, the ratio of POFIL has increased on ratio of AFCL. Similarly, the ratio of POFIL has increased in first two year decrease in third year, again increase in fourth year and decrease in last year with average return ratio of 2.10 absolute measure on standard deviation of 1.83 and relative measure on CV of 0.87.

Figure 4.12

Return on Assets (ROA)



Comparatively, AFCL has higher average return on total assets ratio than POFIL. On the basic of CV the ratio AFCL seems to be more consistent than POFIL because of lower CV of AFCL than POFIL.

4.1.8.4 Net Interest Margin (NIM)

The difference between interest income and interest expenses is called net interest income. And, net earning assets is the total sum of investment of government securities and loan and advances. Thus, the NIM is the ratio of net interest income as percent of net earning assets management of assets and liabilities is affected by the spread between the interest earned on the finances assets and the interest cost on its liabilities. This ratio is examined to measure the profitability of these earning assets. A high margin reflects the better efficiency in utilizing the resource in interest generating sections and vice-versa. That is low level of net earning assets, low interst expenses and high interest revenues will increase the NIM and vice-versa. NIM of AFCL and POFIL are presented in the table 4.10.

Table 4.13

Net Interest Margin (NIM) (in Percent)

Particular/F.Y.	**062/63**	**063/064**	**064/065**	**065/66**	**066/67**	**AV**	**SD**	**CV**
NIM of AFCL	5.88	4.72	4.44	3.67	6.36	5.01	0.98	0.2
NIMof POFIL	4.75	5.80	5.60	7.30	6.90	6.07	0.92	0.15

Source: Annual Reports

The NIM of both finances have fluctuating trend. The NIM of AFCL and POFIL are observed 5.88, 5.72, 4.44, 3.67, 6.36 and 4.75, 5.80, 5.60, 7.30, 6.90 during the study period respectively. In the case of AFCL the maximum NIM of 6.36 in F.Y. 2066/67 and the minimum NIM of 3.67 in F.Y. 2065/066. The average ratio of 5.01, absolute measure on standard deviation of 0.98 and relative measure on CV of 0.2. Likewise, in the case of POFIL, the maximum ratio of 7.30 in F.Y. 2065/066 and minimum ratio of 4.75 in F.Y. 2062/06. The average ratio of 6.07 risk on standard deviation of 0.92 and

relative measure on CV of 0.15, which reflects the low level of risk and more consistency in the NIM ratio than AFCL.

Figure 4.13

Net Interest Margin

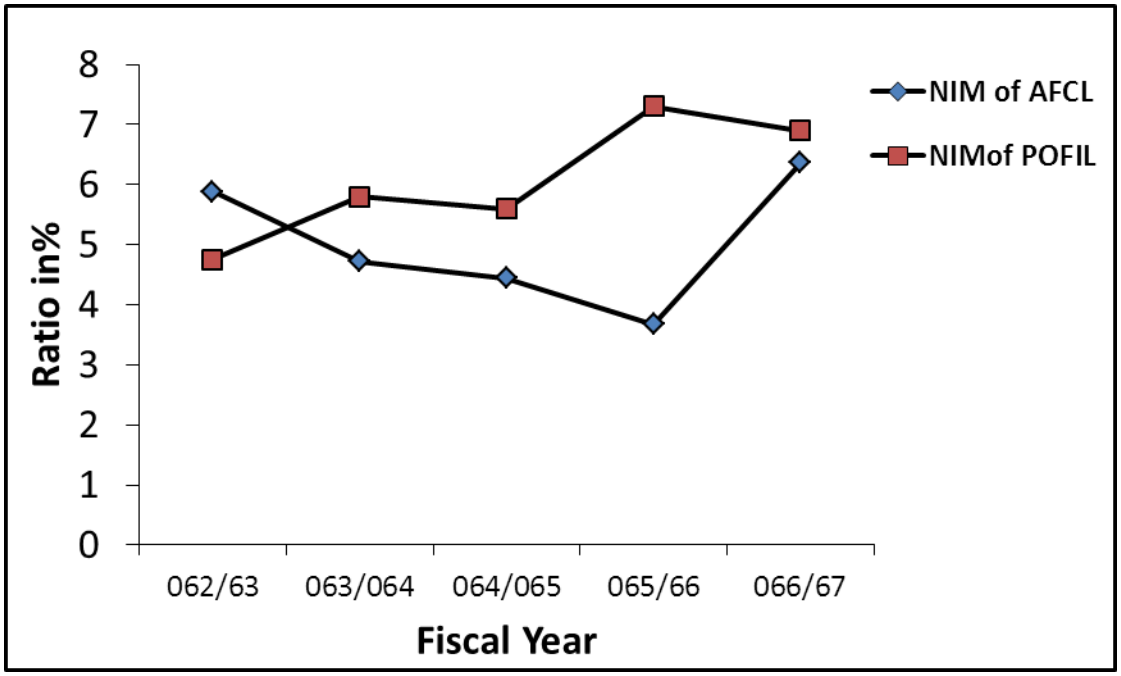


Figure 4.13 shows the observed NIM ratio of AFCL and POFIL during the study period. It shows the ratio of both finances have fluctuating trend. Comparatively the average ratio of POFIL is higher than AFCL. It shows the higher rate of return on net earning assets. Similarly, lower level of risk 0.92 and relative measure on CV of 0.15 indicates POFIL seems more consistency in terms of these ratios during the study period.

4.1.8.5 Price Earning Ratio (P/E Ratio)

P/E ratio can be calculate MPPS divided by EP. It is used to evaluate the finances performance by the investor. The P/E ratio is the measurement tools of profitability on market stability basis. It reflects, in times, the price currently paid by market for each rupee of reported EPS. Higher P/E ratio indicates that the finance growth capacity of earning has been increased but the lower level of P/E ratio indicates that the earnings

are not likely to be raised. Table 4.11, shows the observed value of AFCL and POFIL P/E ratio:

Table 4.14

Price Earning Ratio (In times)

Particular/F.Y.	**062/63**	**063/064**	**064/065**	**065/66**	**066/67**	**AV**	**SD**	**CV**
P/E Ratio of AFCL	12.95	22.48	58.73	49.30	20.43	32.78	17.88	0.55
P/E Ratio of POFIL	90.80	17.78	19.01	11.84	26.39	33.16	32.76	0.96

Source: Annual Reports

Table 4.14 present the P/E ratio of AFCL and POFIL for the period between 2062/063 to 2066/067. The presented figure shows the P/E ratio of AFCL and POFIL are as 12.95, 22.48, 58.73, 49.30, 20.43 and 90.80, 17.78, 19.01, 11.84, 26.39 respectively. Maximum P/E ratio of AFCL 58.73 times in F.Y. 2064/065 and minimum of 12.95 times in the F.Y. 2062/064. Likewise, maximum P/E ratio of POFIL of 90.80 times in F.Y. 2062/063 and minimum of 11.84 times in F.Y. 2065/066 on average, P/E ratio of AFCL is less than that of POFIL i.e. 33.16 and 32.78 and 32.78 times respectively, Absolute measure of standard deviation and relative measure of CV are 17.88, 0.55 and 31.76, 0.96 of AFCL and POFIL respectively.

Figure 4.14

Price Earning Ratio

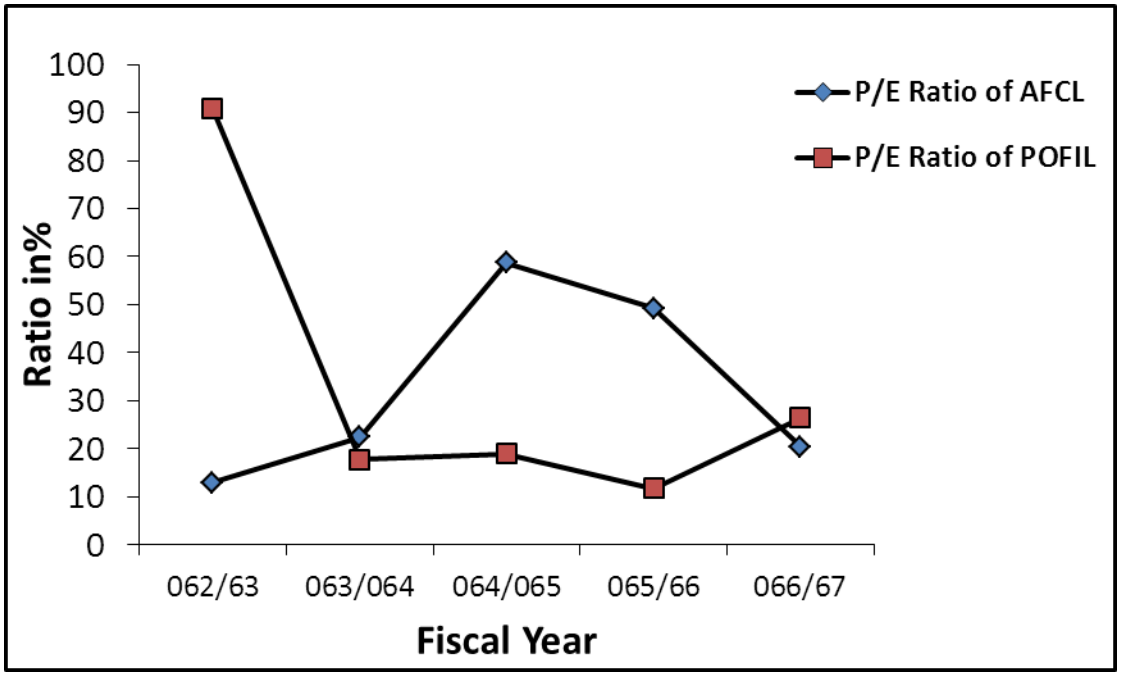


Figure 4.14 presents the P/E ratio of AFCL and POFIL, during the study period. It has been clearly shown that the P/E ratios of both finance are fluctuating trend. Comparatively, the average P/E ratio of POFIL has found higher than that of the AFCL but the absolute measure of standard deviation and relative measure of CV is greater than AFCL, which reflects that the AFCL has better performance per growth in earning than that of POFIL.

4.1.9 Weighted Average Cost of Capital

The combined cost of all sources of capital is called overall, or average, cost of capital. Costs of individual sources and their proportions determined the overall cost of capital of the firm. Thus the overall cost is also called the WACC

Table 4.15

Weighted Average Cost of Capital

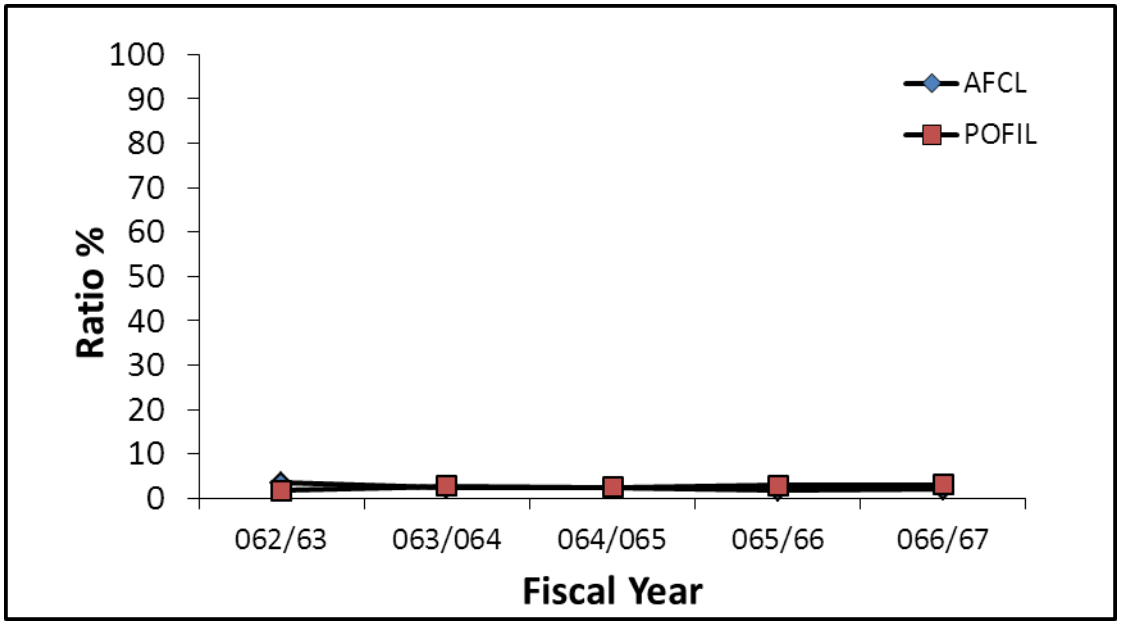
Particular/F.Y.	062/63	063/064	064/065	065/66	066/67	AV	SD	CV
AFCL	3.45	2.26	2.30	1.67	2.03	2.34	0.596	25.47
POFIL	1.71	2.8	2.45	2.88	2.98	0.513	0.513	20.03

Source: Annual Reports

Table 4.15 present the weighted average cost of capital ratio of AFCL and POFIL for the period 2062/063 to 2066/067. The WACC ratio of AFCL and POFIL is 3.45%, 2.26%, 2.30%, 1.67%, 2.03% and 1.71%, 2.8%, 2.45%, 2.88%, 2.98% respectively. The mean WACC ratio 2.34 absolute and relative measures are 0.596 and 25.47 of AFCL. Similarly, the mean WACC of POFIL is 2.56 absolute and relative measures are as 0.513 and 20.03% respectively.

Figure 4.15

Weighted Average Cost of Capital



The WACC ratio is fluctuating over the study period in both finances. The WACC ratio of AFCL is moving down from base year up to F.Y. 2063/064 and it increases in 2066/067. Similarly, in case of POFIL the WACC ratio increase from

base year to F.Y. 2063/064, decrease in F.Y. 2064/065 again increase in last two year of the study period. The WACC ratio of AFCL and POFIL shows in the figure 4, which are 2.45, 2.26, 2.30, 1.67, 2.03 and 1.71, 2.8, 2.45, 2.88, 2.98 respectively**.** The variation in absolute and relative terms of AFCL are 0.596 and 25.47% which are greater than 0.513 and 20.03% and POFIL respective which indicates POFIL has seems more consistency in comparison of AFCL.

4.1.4 Relationship between Capital Structure & Profitability Ratio

Relationship between capital structure and profitability present by comparing debt, equity, ROA, ROE and P/E ratio. Here debt and equity present capital structure of finances and ROA, ROA and P/E ratio indicates profitability of Finances.

Table 4.16

Relationship between Capital Structure and Profitability Ratio of AFCL

FY/Part	Debt	Equity	ROE	ROA	P/E
2062/063	1020037	156146	39.60	2.63	12.95
2063/064	1358613	271755	22.25	2.30	22.48
2064/065	1831634	319721	25.37	2.38	58.73
2065/066	2442258	3.70443	19.88	1.85	49.30
2066/067	3294400	794790	12.19	2.10	20.40
Average $(\bar{X})$	1985.39	382.57	23.66	2.25	32.78
S.D. (σ)	806.57	218	8.65	0.26	17.88
CV	40.63	57%	0.37	0.12	0.55

Source: Work out on Appendix 14, 15, 17

Table 4.16 present the relationship between capital structure and profitability ratio of AFCL for the period from F.Y. 2062/063 to 2066/067. The debt and equity capital is in increasing trend for the study period. When debt capital is Rs. 1020037 and equity capital Rs. 156146. Its measures 38.60% of ROE, 2.63% of ROA and

12.95% of P/E ratio. Debt and equity increase to Rs. 1358613 and Rs. 271755 in F.Y. 2063/064 ROE decrease on 22.25% ROA decrease on 2.30 and P/E ratio increase 22.48%. Again debt and equity ratio increase to Rs. 1831634 and Rs. 319721 respectively ROE, ROA and P/E ratio increase to 25.37%, 2.38%, 2.38% and 58.73% respectively in 2064/065. In F.Y. 2065/066 when debt capital and equity capital increase to 2442258 and Rs 370443 ROE, ROA and P/E ratio again decrease to 19.88%, 1.85% and 49.30%. In the last year of the study period debt and equity capital increase to Rs. 3294400 and Rs. 794790 respectively ROE decrease to 12.19% ROA increase to 2-10% and P/E ratio decrease to 20.40%. The debt and equity capital which measures the capital structure is increasing trend on the study period but the profitability ratio is fluctuating over the study period

Table 4.17

Relation between Capital Structure and Profitability Ratio of POFIL

(Rs. in Million)

FY/Part	Debt	Equity	ROE	ROA	P/E
2062/063	80317	87813	4.57	0.21	90.80
2063/064	969474	109816	23.34	1.30	17.78
2064/065	1109912	124243	24.04	1.17	19.01
2065/066	1231920	394560	37.04	1.17	19.01
2066/067	1165311	399805	10.40	2.10	26.39
Average ($\bar{X}$)	1055.96	223.25	19.94	2.10	33.16
S.D. (σ)	153.12	142.5	11.48	1.83	31.76
CV	14.50	63.83	0.58	0.87	0.96

Source: Work out on Appendix, 14, 15, 17

Table 4.17 present the relationship between capital structure and profitability ratio of POFIL for the study period of 2062/063 to 2066/067. The debt and equity capital is in increasing trend when debt and equity capital is Rs. 80317 and Rs. 87813 respectively in F.Y. 2062/063 the profitability ratio ROE, ROA and P/E ratio are 4.57%, 0.21% and 90.80% respectively. Debt and equity capital increase in F.Y. 2063/064 in Rs.

969474 and 109816 ROE and ROA increase to 23.34% and 1.30% but P/E ratio decrease to 17.78%. Again debt and equity capital increase to Rs. 1109912 and 124243 respectively in F.Y. 2064/065 ROE increase to 24.04% ROA decrease on 1.17% and P/E ratio increase to 19.01%. In the F.Y. 2065/066 debt and equity capital is Rs. 1231320 and Rs. 394560 than the profitability ratio ROE increase to 37.04%, ROA increase to 5.52% but the P/E ratio decrease to 11.84%. In the final year of the study period debt decrease Rs. 1165311 and equity increase to Rs. 399805 than ROE decrease to 10.40, ROA decrease to 2.10 but P/E ratio increase to 26.39%.

Statistical Analysis

Statistical tools are also used for the study purpose, to analyze the data for achieving the objectives and analyzing of relationship of different variables.

4.1.4.1 Coefficient of Correlation between D/E ratio and ROE

The correlation between D/E ratio (x) and ROE (y), ROE being dependent on D/E ratio of the both finances analyzed in order to know weather increase in debt capital portion in the capital structure increase ROE or not. The following result has been obtained for AFCL and POFIL.

Table 4.18

Coefficient of correlation between D/E ratio and ROE

Finances	r	r^2	P.E.	σ P.E.	Relationship	Condition
AFCL	0.69	0.48	0.16	0.96	Positive	r<σP.E.Insig
POFIL	0.29	0.084	0.28	1.68	Negative	r<σP.E.Insig

Table 4.19 presents the coefficient of correlation between D/E ratio and ROE, D/E ratio being independent on ROE of AFCL and POFIL, has been found 0.69 and -0.29 respectively. There is high degree positive relationship of AFCL, it implies that increases in D/E ratio increases the ROE. Similarly, there is negative relationship of POFIL, it implies that increases in D/E ratio, decreases of ROE. Coefficient of determination $(r)^2$ indicates that 48% of variation in ROE is explained by D/E ratio of AFCL whereas only 8.4% of variation in ROE is explained by D/E ratio of POFIL. There has been found the value of 'r' is less than 6 times of P.E. in both finances, it indicates that there is no evidence of correlation. It clears that increasing level of D/E ratio decreases the ROE.

4.1.4.2 Coefficient of Correlation between D/TA ratio and ROA

The correlation between D/TA ratio (X) and ROA (Y) ROA being dependent on D/TA ratio of the both finances analyzed in order to know weather increase in debt capital portion in the capital structure increase ROA or not. The following result has been obtained for AFCL and POFIL.

Table 4.19

Coefficient of Correlation between D/TA Ratio and ROA

Finances	r	r^2	P.E.	σ P.E.	Relationship	Condition
AFCL	0.17	0.0289	0.29	1.74	Positive	r<σP.E.Insi
POFIL	0.78	0.61	0.12	0.72	Negative	r<σP.E.Insi

The correlation between D/TA ratio (x) and ROA (y), ROA being dependent on D/TA ratio of being independent on ROA of AFCL and POFIL, has been found 0.17 and -0.78 respectively. There is high degree positive relationship of AFCL, it implies that increases in D/TA ratio, increases the ROA. Similarly, there is negatively relationship of POFIL, it implies that in D/TA ratio, decrease of ROA. Coefficient of determinate $(r)^2$ indicates that only 2.89% of variation by D/TA ratio of AFCL whereas 61% of variation in ROA is explained by D/TA ratio of POFIL. These has been found the value of 'r' is less than 6 times of P.E in both of finance, it indicates that there is evidence of correlation.

4.1.4.3 Coefficient of Correlation between (CAR and P/E Ratio)

The correlation between CAR (x) and P/E ratio (y), and P/E ratio being dependent on CAR, of the both finance is analyzed in order to know weather increase in CAR in the capital adequacy management increase P/E ratio or not.

Table 4.20

Coefficient of Correlation between CAR and P/E Ratio

Finances	r	r^2	P.E.	σ P.E.	Relationship	Condition
AFCL	0.27	0.073	0.28	1.68	Negative	r<σP.E.Insig
POFIL	0.36	0.13	0.26	1.56	Negative	r<σP.E.Insig

Source: Workout on Appendix

Table 4.20 exhibits the coefficient of correlation between CAR and P/E ratio, CAR being independent on P/E ratio of AFCL and POFIL, has been found -0.27, -0.36 respectively. There is high degree negative relationship of AFCL and POFIL, it implies that increases in CAR, decrease the P/E ratio. Coefficient of determination $(r)^2$ indicates that 7.3% of variation in P/E ratio is explained by CAR of AFCL whereas 13% of variation in P/E ratio is explained by CAR of POFIL, which is higher than POFIL. It also has been found that the value of 'r' is than **σ** P.E of both finances, therefore the value of 'r' is insignificant. It indicates that there is negative relationship between P/E ratio and CAR of both finances. It indicates that increases in CAR decreases in the P/E ratio.

Major Findings

The major findings of the study on capital structure management of comparative study between AFCL and POFIL are as follows:

4.2.1 The paid-up capital of both finances are in increasing trend. The paid-up capital average rate of both finances are 28.32 and 14.48 million of AFCL and POFIL respectively.

4.2.2 The trend analysis of debt capital of both finances are in increasing trend but POFIL debt capital is decrease in the final year of the study. The average debt capital Rs. 1985.39 of AFCL and Rs. 1055.96 of POFIL respectively. The variation in absolute and relative terms are 806.57 and 40.63% of AFCL and 153.12 and 14.50% of POFIL respectively.

4.2.3 The equity capital of both finances are in increasing trend. The average equity capital is Rs. 382.57 of AFCL and Rs. 223.25 of POFIL respectively. The variation in absolute and relative terms are 218 and 57% of AFCL and 142.50 and 63.83% of POFIL respectively.

4.4.4 The D/E ratio of both finances is fluctuating trend. The average debt to equity ratio 559.8 absolute and relative measures are as 93.3 and 16.67 respectively of

AFCL and POFIL has 659.4 average debt to equity ratio, 291 absolute measures and 44.13 relative measures.

4.2.5 The D/TA ratio of both finances is fluctuating trend. The average debt to total assets ratio 84.521 absolute and relative measures are 2.35 and 2.78% of AFCL and 84.10 average debt to total assets ratio, 7.26 absolute measures and 8.63% relative measures of POFIL.

4.2.6 POFIL has higher debt servicing capacity on average 1.75 than 1.72 of AFCL. The absolute and relative measure are 0.10, 0.058 and 0.6, 0.36 of AFCL and POFIL respectively.

4.2.7 The maximum CCAR of AFCL is 25.63 in F.Y. 2066/067 and the minimum CCAR is 13.54 in F.Y. 2065/066 with 17.38 average, an absolute measure in standard deviation of 4.36 and relative measure in CV of 0.25. Similarly, CCAR of POFIL maximum of 30.82 in F.Y. 2065/066 and minimum of 10.15 in F.Y. 2063/064 with average ratio of 18.26, an absolute measure in standard deviation of 9.20 and relative measure in CV of 0.50.

4.2.8 The average ratio of SCAR of AFCL is 1.16 with 0.15 risk on absolute measure and 0.13 measure of CV. Similarly, POFIL has 1.10 SCAR average ratios with 0.50 risk on absolute measure and 0.45 in relative measure of CV.

4.2.9 The total CAR of both finances is above the NRB standard except F.Y. 2063/064 of POFIL. Then CAR average ratio of AFCL and POFIL in 18.54 and 19.35 respectively. The risk on absolute measure and measure of CV are 4.30, 9.57 and 0.23, 0.49 of AFCL and POFIL respectively.

4.2.10 The total expenses to total, income average ratio of AFCL and POFIL are 67.72 and 61.17. The risk in absolute measure of 2.81 and relative measure on CV of 0.04 of AFCL. Similarly, POFIL has 14.06 absolute measure and 0.23 of measure of CV.

4.2.11 The higher average return on equity ratio of AFCL is 23.66 and lower average ratio of POFIL is 19.94. The absolute measure of standard deviation and relative measure of CV of AFCL and POFIL are 8.65, 11.48 and 0.37 and 0.58.

4.2.12 The average return on assets ratio 2.25 absolute measure on standard deviation of 0.26 and relative measure on CV 0.12 of AFCL. Similarly, the ratio of POFIL has 2.10 average return ratio with absolute measure on standard deviation of 1.83 and relative measure on CV of 0.87.

4.2.13 The average NIM ratio of POFIL has been found higher than that of AFCL (i.e. 6.07>5.01). Therefore, POFIL seems to be more efficient utilizing its assets in interest generating purpose in terms of lower level of standard deviation and CV (i.e. 0.92<0.98) and (i.e. 0.15 <0.2) as compared to AFCL.

4.2.14 The average P/E ratio of AFCL and POFIL is 32.78 and 33.16 respectively. Absolute measure of standard deviation and relative measure of CV are 17.88, 0.55 and 31.76, 0.96 of AFCL and POFIL respectively.

4.2.15 The average WACC ratio of AFCL is 2.34 and 2.56 of POFIL. The absolute measure of standard deviation and relative measure of CV of AFCL and POFIL are 0.596, 25.47% and 0.513, 20.03% respectively.

4.2.16 The correlation between D/E ratio and ROE of AFCL and POFIL has found 0.69 positive relationship of AFCL and 0.29 negative relationship of POFIL. The value of 'r' is less than 6 times of P.E. in both finance which indicates insignificant relationship.

4.2.17 The correlation between D/TA ratio and ROA of AFCL has found 0.17 with positive relationship and POFIL has found 0.78 with negative relationship. Similarly, the value of 'r' is less than 6 P.E. of both finances, which proves that there exists in significant relationship between the dependent variable D/TA ratio and independent variable ROA.

4.2.18 The correlation between CAR and P/E ratio of AFCL has found 0.27 with negative relationship and POFIL has found 0.36 with negative relationship. Similarly, the value of 'r' is less than 6 P.E. of both finances. It proves that there exist insignificant relationship between the dependent variable CAR and independent variable P/E ratio.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The study was carried out as a academic requirement for master's degree of business studies, on the topic of "Capital Structure Management: Comparative Analysis of AFCL and POFIL". The study was started with the objective to find out the fact about capital structure of selected finances. The study is based on the secondary data, such as; compiled annual report from NRB, annual, report and financial statements of the respective finances and their website are used as major sources of data. In this case study, various financial and statistical tools have been used to get the meaningful result and to meet the research objectives. The main objectives of the study is to examine the core capital adequacy, supplementary capital adequacy as well as D/E ratio, debt servicing capacity, to evaluate the profitability position and to provide suggestion and recommendation for their improvement. The study has analyzed capital structure, capital adequacy and profitability position between two finances AFCL and POFIL during the five year period from F.Y. 2062/063 to F.Y. 2067/068.

The analysis has been made to compare the finances ratio with NRB standard. The paid-up capital of both finances has been increased during the study period. The D/E ratio and ICR of both finances are fluctuating trend. The core capital adequacy ratio and total capital adequacy ratio of both finances are above the NRB standard except F.Y. 2063/064 of POFIL, which shows the protection and security to creditors and depositors as well as financial soundness of the finance. The supplementary capital adequacy ratio of both finances is within the limit as per the NRB standard over the review periods. So, the finances are running with adequate capital with sound and strong financial position. The total expenses to total income ratio of both finances are fluctuating trend and the ROA and ROE of the both finances are also in fluctuating trend. The average ROE of AFCL is higher than POFIL and the average ROA of

AFCL is higher than POFIL. NIM of both finances is in fluctuating trend but shows better management of assets and liabilities during the study period. The price earning ratio of both finances is fluctuating. The WACC of POFIL has been maintaining comparatively higher than AFCL from second year to end of the study period. The correlation coefficient exists insignificant relationship in both finances.

5.2 Conclusion

This part focuses on conclusion made from the study. Following conclusions can be made from the study.

5.2.1 The paid-up capital average ratio of both finances are 28.32 and 14.48 million of AFCL and POFIL respectively. Increase paid-up capital of both finances indicates that the both finances are trying to abide the NRB regulation in the regard of paid-up capital.

5.2.2 The trend analysis of debt capital of AFCL is in increasing trend POFIL also in increasing trend which is good for the finance but the final year of the study the debt capital is decrease. The average debt capital, absolute and relative terms are RS. 1985.39, 806.57 and 40.63% of AFCL and RS. 1055.96, 153.12 and 14.50% of POFIL respectively.

5.2.3 The equity capital of both finances are in increasing trend. The average equity, variation in absolute and relative terms are RS. 282.57, 218 and 57% of AFCL and RS. 223.25, 142.50 and 63.83% of POFIL respectively.

5.2.4 The D/E ratio of both finances is fluctuating over the study period. POFIL in each year with higher mean but AFCL has lower standard deviation and lower CV than POFIL. It indicates that AFCL is more consistent and more uniformity in terms of ratio. Debt equity ratio of POFIL is very large among the two finances. It also indicates that the company has large amount to be paid as interest on debt.

5.2.5 The average debt to total assets ratio 84.52, absolute and relative measures are 2.35 and 2.75% of AFCL and 84.10 average debt to total assets ratio, 7.26 absolute measures and 8.63% relative measures of POFIL. POFIL shows greater variation than AFCL which indicates AFCL has seems more consistency in comparison of POFIL.

5.2.6 The ICR of both finances is fluctuating over the study period. POFIL has higher debt servicing capacity on average but AFCL has lower level of standard deviation and lower level of CV indicates more consistency in terms of ICR. Comparatively AFCL is even consistent in terms of lower level of CV.

5.2.7 The CCAR of both finances is slightly fluctuating over the study period. Although, the CCAR is above the NRB standard that is the CCAR is adequate and sufficient on both finances. It also provides a protection and security to creditors and depositor, implies financial soundness of the finance.

5.2.8 The SCAR of both finance is within the limit of NRB standard as prescribed by NRB, which should as prescribed by NRB, which should not be more than CCAR of the respective finances.

5.2.9 The total CAR of both finances is fluctuating trend over the review period. Although, AFCL has lower level of risk in terms of relative measure, indicates more consistency between the ratios. However, throughout the review period, the total CAR of both finances is above the NRB standard except F.Y. 2063/064 of POFIL. In this year, the CAR difference is negative, so POFIL CAR is not within NRB standard only in F.Y. 2063/064 which indicates that the financial position of the sampled finances is sound and strong.

5.2.10 The total expenses to total income of AFCL is maximum in F.Y. 2065/066 with 72.25% and minimum in F.Y. 2064/065 with 64.17%. Similarly, the ratio of POFIL is maximum in F.Y. 2064/065 with 73.10% and minimum in F.Y. 2062/063 with 60.80%. The lower level of relative measure on CV (0.04 < 0.23) indicates more consistency in the ratio.

5.2.11 The ROE of AFCL is maximum in F.Y. 2062/063 with 38.60% and minimum in 2066/067 with 12.19%. But, the ROE of POFIL is maximum in F.Y. 2065/066 with 37.34% and minimum F.Y. 2062/063 with 4.57%. The higher average ratio of AFCL (i.e. 23.66 > 19.94) and lower level of relative measure of CV (i.e. 0.37>0.58), indicates more consistency in the ratio of AFCL than POFIL. So, the AFCL has found more efficiency to utilize share holders fund to generate more profit than POFIL.

5.2.12 The ROA of both finances is fluctuating trend over the review period. Throughout the study period, the ROA of AFCL is most preferable due to lower level of absolute and relative measure (i.e. 0.26<1.83) and (i.e. 0.12<0.87) than that of POFIL. AFCL seems efficient to utilize its resources in the most profitable as compared to POFIL.

5.2.13 The NIM of both finances also has been fluctuated over the review period. The average NIM ratio of POFIL has been found higher than that of AFCL (i.e. 6.07>5.01). Therefore, POFIL seems to be more efficient in utilizing its assets in interest generating purpose in terms of lower level of standard deviation and CV (i.e. 0.92 < 0.98) and (i.e. 0.15<0.2) as compared to AFCL.

5.2.14 The maximum P/E ratio of AFCL is 58.73 times in F.Y. 2064/065 and minimum P/E ratio is 12.95 times in F.Y. 2062/063. Similarly, the maximum P/E ratio of POFIL is 90.80 times in F.Y. 2062/063 and minimum P/E ratio is 11.84 times in F.Y. 2065/066. AFCL indicates more consistency in the P/E ratio than POFIL with lower relative measure on CV (i.e. 055<0.96).

5.2.15 AFCL has more CV for the ratio by 25.47% than POFIL 20% POFIL has been maintaining comparatively lower WACC ratio than AFCL

5.1.16 Basically, increasing capital structure increase the profitability ratio but these finances there is no constant city in fluctuating capital structure so the profitability ratio also in fluctuating ratio . There is no Correlation between D/E ratio and ROE, D/TA ratio and ROA and CAR and P/E ratio of both finances

exists insignificant relationship between dependent variable and independent variable.

5.3 Recommendation

Due to the constraint time and limitation of the thesis only major recommendation are mentioned as below, otherwise there are many recommendation for the management of both finances.

5.3.1 The increasing pattern of paid-up capital is an indicator of increasing internal sources in the finances. Thus it advised to keep continue the same by synchronizing the NRB standard.

5.3.2 Increasing debt and equity capital is good for the finances. Thus it advised to keep continue but recommended to adopt the stable policy.

5.3.4 The low level of ICR is an indicator of poor debt servicing capacity in both finances. So, the higher ratio is favorable, it is recommended to both finances to improve the ICR efficiently. It is necessary to sustain the business in long run.

5.3.5 Capital adequacy ratio of both finance as sufficient as per NRB standard expect in F.Y. 2063/064 of POFIL and the ratios are changing frequently of both finances during the study period. So, it is suggested to maintain stable capital adequacy ratios within the boundary of NRB standard.

5.3.6 The total expenses to total income ratio of both finances are fluctuating trend during the review period. So, it is recommended to the management of the both finances to reduce to ratio, which may increase the finance profitability.

5.3.7 Both finances are recommended to increase their ROE and ROA ratio through full utilization of fund to maximize shareholder's wealth.

5.3.8 Minimum WACC is good for the company so it is recommended to minimize their WACC.

5.3.9 Increasing debt capital increase more risk and profit. Thus, both finances are required to maintain improved capital structure by increasing equity base i.e. either issuing more capital or expanding general reserve and retained more earnings with this improved capital structure of the finances, it will compromise among the conflicting factors of cost and finances risk. There is no constant city in fluctuating capital structure so the profitability ratio also in fluctuating trend, it is recommended to both finances to maintained the capital structure.

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APPENDIX- 1
Paid up Capital

(Rs in million)

FY/ Particulars	**AFCL**	**POFCL**	**$(x-\bar{x})^2$**	**$(x-\bar{x})^2$**
62/63	80	52	41290.24	861184
63/64	168	60	13271.04	7191.04
64/65	201.6	60	6658.56	7191.04
65/66	262.1	240	445.21	9063.04
66/67	704.30	312	177687.54	27955.84
Total	**1416**	**724**	**239352.59**	**60012.80**
Average ($\bar{x}$)	**283.20**	**144.80**		
SD (σ)	**218.80**	**109.60**		
CV	**77.30**	**75.70**		

Average $(\bar{x}) = \frac{\sum x}{n}$

AFCL = $\frac{1416}{5}$ = 283.22 POFIL = $\frac{724}{5}$ = 144.80

SD (σ) = $\sqrt{\sum \frac{(x-\bar{x})^2}{N}}$

AFCL = $\sqrt{\frac{239352.59}{5}}$ = 218.80 POFIL = $\sqrt{\frac{60012.80}{5}}$ = 109.60

CV = $\frac{\sigma}{\bar{x}} \times 100$

AFCL = $\frac{218.80}{283.20} \times 100$ = 77.30 POFIL = $\frac{109.60}{144.80} \times 100$ =25.70

APPENDIX- 2
Debt Capital

(Rs in million)

FY/ Particulars	**AFCL**	**POFCL**	**$(x-\bar{x})^2$**	**$(x-\bar{x})^2$**
62/63	1020.04	803.17	931900.62	63902.78
63/64	1358.61	969.47	392853.17	7480.52
64/65	1831.63	1109.91	23642.14	2910.60
65/66	2422.26	1231.91	190855.40	30958.40
66/67	3294.40	1165.31	1713507.18	11957.42
Total	**9926.94**	**5279.77**	3252758.51	117209.72
Average ($\bar{x}$)	**1985.39**	**1055.96**		
SD (σ)	**806.57**	**153.12**		
CV	**40.63**	**14.50**		

Average $(\overline{x}) = \frac{\sum x}{n}$

AFCL = $\frac{9926.94}{5}$ = 1985.39

POFIL = $\frac{5279.77}{5}$ = 1055.96

SD (σ) = $\sqrt{\sum \frac{(x-\bar{x})^2}{N}}$

AFCL = $\sqrt{\frac{3252785.51}{5}}$ = 806.57

POFIL = $\sqrt{\frac{117209.72}{5}}$ = 153.12

CV = $\frac{\sigma}{\bar{x}} \times 100$

AFCL = $\frac{806.57}{1985.39} = 40.63$

POFIL = $\frac{153.12}{1055.96}$ = 14.50%

AAPENDIX-3
Equity Capital

(Rs in million)

FY/ Particulars	**AFCL**	**POFCL**	**$(x-\bar{x})^2$**	**$(x-\bar{x})^2$**
62/63	156.15	87.81	51266.02	18343.99
63/64	271.76	109.82	12278.86	12866.36
64/65	319.72	124.24	3950.12	9802.98
65/66	370.44	394.56	147.14	29347.12
66/67	794.79	399.81	169925.33	31173.43
Total	**1912.86**	**1116.24**	**237567.47**	**101533.88**
Average ($\bar{x}$)	**382.57**	**223.25**		
SD (σ)	**218**	**142.5**		
CV	**57%**	**63.83**		

Average $(\overline{x}) = \frac{\sum x}{n}$

AFCL = $\frac{1912.86}{5}$ = 382.57

POFIL = $\frac{1116.24}{5}$ = 223.25

SD (σ) = $\sqrt{\sum \frac{(x-\bar{x})^2}{N}}$

AFCL = $\sqrt{\frac{237567.47}{5}}$ = 218

POFIL = $\sqrt{\frac{101533.88}{5}}$ = 142.5

CV = $\frac{\sigma}{\bar{x}} \times 100$

AFCL = $\frac{218}{382.57} = 57$

POFIL = $\frac{142.60}{223.25}$ = 63.83%

AAPENDIX-4
Total Debt of Equity Ratio

(Rs in '000)

FY/Particular	**Debt**	**Equity**	**D/E ratio**	**$(x-\bar{x})^2$**	**Debt**	**Equity**	**D/E**	**$(x-\bar{x})^2$**
62/63	1020037	156146	653	8686.24	803170	87813	915	65331.36
63/64	1358613	271755	500	3576.04	969474	109816	883	49996.96
64/65	1831634	319.721	573	174.24	1109912	124243	893	54568.96
65/66	2442258	370443	659	9840.64	1231920	394560	312	120686.76
66/67	3294400	794790	414	21257.64	1165311	395805	294	133517.16
Total			**2799**	**43534.80**			**3297**	**424101.20**
Average ($\bar{x}$)			**559.8**				**659.4**	
SD (σ)			**93.31**				**291**	
CV			**16.67**				**44.13**	

Average $(\bar{x}) = \frac{\sum x}{N}$

AFCL = $\frac{2799}{559.8}$ = 559.8 POFIL = $\frac{3297}{5}$ = 659.40

SD (σ) = $\sqrt{\sum \frac{(x-\bar{x})^2}{N}}$

AFCL = $\sqrt{\frac{43534.80}{5}}$ = 93.31 POFIL = $\sqrt{\frac{424101.20}{5}}$ = 291

CV = $\frac{\sigma}{\bar{x}}$

AFCL = $\frac{93.31}{559.80}$ = 16.67 POFIL = $\frac{291}{659.4}$ = 44.13

AAPENDIX-5

Appendix table for correlation analysis

Coefficient of correlation between D/E Ratio (x) and ROE (y)

AFCL

(Rs in million)

X	Y	XY	x^2	y^2
653	38.60	25205.80	426409	1489.96
500	22.25	11125	250000	495.06
573	25.37	14537.01	328329	643.64
659	19.88	13100.92	434281	395.21
414	12.19	5046.66	171396	148.60
$\sum x = 2799$	$\sum y = 118.29$	$\sum xy = 69015.39$	$\sum x^2 = 1610415$	$\sum y^2 = 3172.47$

Correlation Coefficient:

$$(r) = \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2}\sqrt{N\sum y^2 - (\sum y)^2}}$$

$$= \frac{5\times 69015.39 - 2799\times 118.29}{\sqrt{5\times 1610415 - (2799)^2}\sqrt{5\times 3172.47 - (118.29)^2}}$$

$$= \frac{345076.95 - 331093.71}{\sqrt{8052075 - 7834401}.\sqrt{15862.35 - 13992.52}}$$

$$= \frac{13983.24}{466.56\times 43.24}$$

$$= \frac{13983.24}{20174.05} = 0.69$$

$(r)^2 = 0.48$

Calculation of Probable Error

$$P.E. = 0.6745\times \frac{1-r^r}{\sqrt{N}}$$

$$=0.6745\times \frac{1-0.48}{\sqrt{5}}$$

$$= 0.16$$

6 P.E. = 0.96

POFIL

(Rs in million)

X	Y	XY	x^2	y^2
915	4.57	4181.55	837225	20.8849
883	23.34	20609.22	779689	544.7556
893	24.04	21467.72	797449	577.9216
312	37.34	11650.08	97344	1394.2759
294	10.40	3057.60	86436	108.16
$\sum x = 3297$	$\sum y = 99.69$	$\sum xy = 60966.17$	$\sum x^2 = 2598143$	$\sum y^2 = 2640$

Correlation Coefficient:

(r) $= \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2}\sqrt{N\sum y^2 - (\sum y)^2}}$

$= \frac{5\times 60966.17 - 3297\times 99.69}{\sqrt{5\times 2598143 - (3297)^2}\sqrt{5\times 2640 - (99.69)^2}}$

$= \frac{304830.85 - 328677.93}{\sqrt{12990715 - 10870209}\sqrt{13200 - 9938.09}}$

$= \frac{-23847.08}{1456.20\times 57.11}$

$= \frac{-23847.08}{83163.58} = 0.29$

$(r)^2 = 0.084$

Calculation of Probable Error

P.E. $= 0.6745\times \frac{1-r^r}{\sqrt{N}}$

$=0.674\times \frac{1-0.084}{\sqrt{5}}$

$= 0.28$

6 P.E. = 1.68

Appendix-6
Total Debt to Total Assets Ratio

(Rs in '000)

FY/Particular	**Debt**	**T.A.**	**%**	**$(x-\bar{x})^2$**	**Debt**	**T.A.**	**%**	**$(x-\bar{x})^2$**
62/63	1020037	1176183	86.72	4.84	803170	890984	90.14	36.4816
63/64	1358613	1630369	83.33	1.4161	969747	1079290	89.83	32.8329
64/65	1831634	2151356	85.14	0.3844	1109912	1234155	89.93	33.9889
65/66	2442258	2812702	86.83	5.3361	1231920	1626480	75.74	69.888896
66/67	3294400	4089190	80.56	1568.16	1165311	1561116	74.65	89.3025
Total			**422.58**	**27.6582**			**420.29**	**262.4955**
Average ($\bar{x}$)			**84.52**				**84.10**	
SD (σ)			**2.35**				**7.26**	
CV			**2.78**				**8.63**	

Average $(\bar{x}) = \frac{\sum x}{N}$

AFCL = $\frac{422.58}{5} = 84.52$ POFIL = $\frac{420.29}{5} = 84.10$

SD $(\sigma) = \sqrt{\sum \frac{(x-\bar{x})^2}{n}}$

AFCL = $\sqrt{\frac{27.6582}{5}} = 2.35$ POFIL = $\sqrt{\frac{262.4955}{5}} = 7.26$

CV = $\frac{\sigma}{\bar{x}}$

AFCL = $\frac{2.35}{84.52} = 2.78$ POFIL = $\frac{7.26}{84.10} = 8.63\%$

AAPENDIX-7

Appendix table for correlation Analysis

Coefficient of Correlation between D/T.A. Ratio (x) and ROA (y)

AFCL

(Rs in million)

X	**Y**	**XY**	**x^2**	**y^2**
86.72	2.63	228.07	7520.36	6.9169
83.33	2.30	191.66	6943.89	5.29
85.14	2.38	202.63	7248.82	5.6644
86.83	1.85	160.64	7539.45	3.4225
80.56	2.10	169.18	6489.91	4.451
$\sum x = 422.58$	$\sum y = 11.26$	$\sum xy = 852.18$	$\sum x^2 = 35742.43$	$\sum y^2 = 25.7038$

Correlation Coefficient:

$$(r) = \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2}\sqrt{N\sum y^2 - (\sum y)^2}}$$

$$= \frac{5\times 952.18 - 422.58\times 11.26}{\sqrt{5\times 35742.43 - (422.58)^2}\sqrt{5\times 25.7038 - (11.26)^2}}$$

$$= \frac{4760.90 - 4758.25}{\sqrt{178712.15 - 178573.86}\sqrt{128.519 - 126.7876}}$$

$$= \frac{2.56}{11.76\times 1.32}$$

$$= \frac{2.65}{15.5232} = 0.17$$

$(r)^2 = 0.289$

Calculation of Probable Error

$$P.E. = 0.6745\times \frac{1-r^r}{\sqrt{N}}$$

$$= 0.6745\times \frac{1-0.0289}{2.236}$$

$$= 0.29$$

6 P.E. = 1.74

POFIL

(Rs in million)

X	**Y**	**XY**	**x^2**	**y^2**
90.14	0.21	18.9294	8125.22	0.0441
89.83	1.30	116.779	8069.43	1.69
89.93	1.17	105.2181	8087.40	1.3689
75.74	5.51	417.3274	5736.55	30.3601
74.65	2.10	156.756	5572.62	4.41
$\sum x = 420.29$	$\sum y = 10.29$	$\sum xy = 815.01$	$\sum x^2 = 35571.22$	$\sum y^2 = 37.8731$

Correlation Coefficient:

(r) $= \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2}\sqrt{N\sum y^2 - (\sum y)^2}}$

$= \frac{5\times.815.01 - 420.29\times 10.29}{\sqrt{5\times 35571.22 - (420.29)^2}\sqrt{5\times 37.873 - (10.29)^2}}$

$= \frac{4075.05 - 4324.78}{\sqrt{177856.1 - 176643.68}\sqrt{189.365 - 105.88}}$

$= \frac{-249.73}{34.82\times 9.14}$

$= \frac{-249.73}{318.255}$ = -0.78

$(r)^2$ = 0.61

Calculation of Probable Error

P.E. $= 0.6745\times \frac{1-r^r}{\sqrt{N}}$

$=0.674\times \frac{1-0.61}{\sqrt{5}}$

= 0.12

6 P.E. = 0.72

AAPENDIX-8

Interest Coverage Ratio (In time)

(Rs in '0000)

AFCL					POFCL			
FY/Particular	**EBIT**	**Interest**	**ICR%**	**$(x-\bar{x})^2$**	**EBIT**	**Interest**	**ICR%**	**$(x-\bar{x})^2$**
62/63	11013	6213	1.8	0.0064	6315	5349	1.2	0.3025
63/64	13608	7605	1.8	0.0064	87921	5979	1.5	0.0625
64/65	18712	10494	1.8	0.0064	10777	7579	1.4	0.1225
65/66	23043	14828	1.6	0.0144	21251	7171	2.96	0.0025
66/67	35377	21864	1.6	0.048	14215	8491	1.7	1.9542
Total			**8.6**				**8.76**	
Average ($\bar{x}$)			**1.72**				**1.75**	
SD (σ)			**0.10**				**0.63**	
CV			**0.058**				**0.36**	

Average $(\bar{x}) = \frac{\sum x}{n}$

AFCL = $\frac{8.6}{5} = 1.72$ POFCL = $\frac{8.76}{5} = 1.75$

SD $(\sigma) = \sqrt{\sum \frac{(x-\bar{x})^2}{n}}$

AFCL = $\sqrt{\frac{0.048}{5}} = 0.10$ POFCL = $\sqrt{\frac{1.9542}{5}} = 0.63$

CV = $\frac{\sigma}{\bar{x}}$

AFCL = $\frac{0.10}{1.72} = 0.058$ POFCL = $\frac{0.63}{1.75} = 0.36$

AAPENDIX-9
Core capital Adequacy Ratio

(Rs in '000)

	AFCL				POFCL			
FY/Particular	**Core Capital**	**T. Risk W.A**	**CCAR %**	**$(x-\bar{x})^2$**	**Core Capital**	**T.R. WA**	**CCAR %**	**$(x-\bar{x})^2$**
62/63	156146	1094123	14.27	1.6721	87714	746603	11.75	42.3801
63/64	271756	1543539	17.61	0.0529	109816	1081858	10.15	65.7721
64/65	319722	2019776	15.83	2.4025	124243	118402	10.49	60.3729
65/66	368503	2722870	13.54	14.7456	394561	1280251	30.82	157.7536
66/67	790016	3081537	25.63	68.0625	395805	1409440	28.10	96.8256
Total			86.88	94.935			91.30	423.1043
Average $(\bar{x})$			17.38				18.26	
SD (σ)			4.36				9.20	
CV			0.25				0.50	

Average $(\bar{x}) = \frac{\sum x}{n}$

AFCL = $\frac{86.88}{5} = 17.38$ POFCL = $\frac{91.30}{5} = 18.26$

SD $(\sigma) = \sqrt{\sum \frac{(x-\bar{x})^2}{n}}$

AFCL = $\sqrt{\frac{94.935}{5}} = 4.36$ POFCL = $\sqrt{\frac{423.1043}{5}} = 9.20$

CV = $\frac{\sigma}{\bar{x}}$

AFCL = $\frac{4.36}{17.38} = 0.25$ POFCL = $\frac{9.20}{18.26} = 0.50$

AAPENDIX-10
Supplementary Capital Adequacy Ratio

(Rs in '000)

AFCL					**POFCL**			
FY/Particular	**SC**	**TRWA**	**SCAR%**	**$(x-\bar{x})^2$**	**SC**	**TRWA**	**SCAR%**	**$(x-\bar{x})^2$**
62/63	15009	1094123	1.37	0.0041	6523	746003	0.87	0.0529
63/64	19342	1543539	1.25	0.0081	7017	108158	0.65	0.2025
64/65	24047	2019776	1.19	0.0009	11184	1184402	0.94	0.0565
65/66	28013	2721870	1.03	0.0169	26668	1280251	2.08	0.9604
66/67	29897	3081537	0.97	0.0361	13046	1409440	0.93	1.2703
Total			**5.81**	**0.1061**			**5.47**	
Average ($\bar{x}$)			**1.16**				**1.10**	
SD (σ)			**1.15**				**0.50**	
CV			**0.13**				**0.45**	

Average $(\bar{x}) = \frac{\sum x}{n}$

AFCL = $\frac{5.81}{5} = 1.16$ POFCL = $\frac{5.47}{5} = 1.10$

SD $(\sigma) = \sqrt{\sum \frac{(x-\bar{x})^2}{n}}$

AFCL = $\sqrt{\frac{0.1061}{5}} = 0.75$ POFCL = $\sqrt{\frac{1.2703}{5}} = 0.50$

CV = $\frac{\sigma}{\bar{x}}$

AFCL = $\frac{0.15}{1.16} = 0.13$ POFCL = $\frac{0.50}{1.10} = 0.45$

AAPENDIX-11
Capital Adequacy Ratio

(Rs in '000)

AFCL					POFCL			
FY/Particular	**C fund**	**T. R. WA**	**CAR %**	**$(x-\bar{x})^2$**	**CF**	**T.T.WA**	**CAR %**	**$(x-\bar{x})^2$**
62/63	171155	1094123	1564	8.41	94237	746603	12.62	45.2929
63/64	291098	1543539	1885	0.0961	116833	1081858	10.80	73.1025
64/65	343769	2019776	1702	2.3104	135427	1184402	11.43	62.7264
65/66	396516	2721870	14.57	15.7609	421229	1280251	32.90	183.6025
66/67	819914	3081537	26.61	65.1249	408851	1409440	29.01	93.3156
Total			**92.69**	**91.7123**			**96.76**	**458.0399**
Average ($\bar{x}$)			**18.54**				**19.35**	
SD (σ)			**4.30**				**9.57**	
CV			**0.23**				**0.49**	

Average $(\bar{x}) = \frac{\sum x}{n}$

AFCL = $\frac{92.69}{5}$ = 18.54 POFCL = $\frac{96.76}{5}$ = 19.35

SD (σ) = $\sqrt{\sum \frac{(x-\bar{x})^2}{n}}$

AFCL = $\sqrt{\frac{91.7123}{5}}$ = 4.30 POFCL = $\sqrt{\frac{458.0399}{5}}$ = 9.57

CV = $\frac{\sigma}{\bar{x}}$

AFCL = $\frac{4.30}{18.54}$ = 0.23 POFCL = $\frac{9.57}{19.35}$ = 0.49

APPENDIX-12

Appendix table for correlation Analysis

Coefficient of Correlation between CAR (x) and P/E (y)

AFCL

(Rs in million)

X	Y	XY	x^2	y^2
15.64	12.95	2025.38	244.61	167.70
18.85	22.48	423.748	355.32	505.35
17.62	58.73	1034.8226	310.46	3449.21
14.57	49.30	718.301	212.28	2430.50
26.61	20.43	543.6423	708.10	417.38
$\sum x = 92.69$	$\sum y = 163.89$	$\sum xy = 2923.05$	$\sum x^2 = 1830.77$	$\sum y^2 = 6970.14$

Correlation Coefficient:

$$(r) = \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2}\sqrt{N\sum y^2 - (\sum y)^2}}$$

$$= \frac{5\times 2923.05 - 92.69\times 163.89}{\sqrt{5\times 1830.77 - (92.69)^2}\sqrt{5\times 6970.14 - (163.89)^2}}$$

$$= \frac{14615.25 - 15190.96}{\sqrt{9153.85 - 8591.44}\sqrt{34850.7 - 26859.93}}$$

$$= \frac{-575.71}{23.72\times 89.39}$$

$$= \frac{-575.71}{2120.33} = 0.27$$

$(r)^2 = 0.73$

Calculation of Probable Error

$$P.E. = 0.6745\times \frac{1-r^r}{\sqrt{N}}$$

$$= 0.6745\times \frac{1-0.073}{2.236}$$

$$= 0.28$$

6 P.E. = 1.68

POFIL

(Rs in million)

X	Y	XY	x^2	y^2
90.14	0.21	18.9294	8125.22	0.0441
89.83	1.30	116.779	8069.43	1.69
89.93	1.17	105.2181	8087.40	1.3689
75.74	5.51	417.3274	5736.55	30.3601
74.65	2.10	156.756	5572.62	4.41
$\sum x = 420.29$	$\sum y = 10.29$	$\sum xy = 815.01$	$\sum x^2 = 35571.22$	$\sum y^2 = 37.8731$

Correlation Coefficient:

(r) $= \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2}\sqrt{N\sum y^2 - (\sum y)^2}}$

$= \frac{5\times 2710.31 - 96.76\times 165.82}{\sqrt{5\times 2330.53 - (96.76)^2}\sqrt{5\times 978.77 - (165.81)^2}}$

$= \frac{13551.55 - 16044.74}{\sqrt{11652.62 - 9362.50}\sqrt{48793.85 - 27496.27}}$

$= \frac{-2493.19}{47.86\times 145.94}$

$= \frac{-2493.19}{6984.69} = -0.36$

$(r)^2 = 0.13$

Calculation of Probable Error

P.E. $= 0.6745\times \frac{1-r^r}{\sqrt{N}}$

$=0.674\times \frac{1-0.13}{\sqrt{5}}$

$= 0.26$

6 P.E. = 1.56

AAPENDIX-13

Total Expenses to Total Income Ratio

(Rs in '000)

AFCL					**POFCL**			
FY/Particular	**T.E**	**T.I**	**Ratio %**	**(x-$\bar{x}$)²**	**T.E**	**T.I**	**%**	**(x-$\bar{x}$)²**
62/63	93820	137455	68.26	0.29	56127	92322	60.80	0.14
63/64	104765	159336	65.58	4.58	84227	11686	72.10	119.46
64/65	133779	208487	64.17	13.60	96332	131783	73.10	142.32
65/66	194474	269154	72.15	20.52	76505	221525	34.54	709.16
66/67	291545	426688	68.33	0.37	12518	191848	65.30	17.06
Total			**338.59**	**39.36**			**305.84**	**988.14**
Average ($\bar{x}$)			**67.72**				**61.17**	
SD (σ)			**2.51**				**14.06**	
CV			**0.04**				**0.23**	

Average $(\bar{x}) = \frac{\sum x}{n}$

AFCL = $\frac{338.59}{5}$ = 67.72

POFCL = $\frac{305.84}{5}$ = 61.17

SD (σ) = $\sqrt{\sum \frac{(x-\bar{x})^2}{n}}$

AFCL = $\sqrt{\frac{39.36}{5}}$ = 2.81

POFCL = $\sqrt{\frac{988.14}{5}}$ = 14.06

CV = $\frac{\sigma}{\bar{x}}$

AFCL = $\frac{2.81}{67.72}$ = 0.04

POFCL = $\frac{14.06}{61.17}$ = 0.23

AAPENDIX-14
Return on Equity (ROE)

(Rs in '000)

AFCL					POFCL			
FY/Particular	**NPAT**	**S.E**	**ROE**	**$(x-\bar{x})^2$**	**NPAT**	**SE**	**ROE**	**$(x-\bar{x})^2$**
62/63	30877	80000	38.60	223.2036	1827	400	4.57	236.236
63/64	37378	168000	22.25	1.9881	14003	600	23.34	11.56
64/65	51149	201600	25.37	2.9241	14427	600	24.04	16.81
65/66	52101	262080	19.88	131.5669	89605	2400	37.34	362.76
66/67	58819	704287	12.19	173.9651	89605	312000	10.40	91.0116
Total			**118.3**		**32445**		**99.70**	**658.3785**
Average ($\bar{x}$)			**23.66**				**19.94**	
SD (σ)			**8.65**				**11.48**	
CV			**0.37**				**0.58**	

Average $(\bar{x}) = \frac{\sum x}{n}$

AFCL = $\frac{118.30}{5} = 23.65$ POFCL = $\frac{99.70}{5} = 19.94$

SD $(\sigma) = \sqrt{\sum \frac{(x-\bar{x})^2}{n}}$

AFCL = $\sqrt{\frac{373.9651}{5}} = 8.65$ POFCL = $\sqrt{\frac{658.3785}{5}} = 11.48$

CV = $\frac{\sigma}{\bar{x}}$

AFCL = $\frac{8.65}{23.66} = 0.37$ POFCL = $\frac{11.48}{19.94} = 0.58$

AAPENDIX-15
Return on Assets (ROA)

(Rs in '000)

AFCL					**POFCL**			
FY/Particular	**NPAT**	**TA**	**ROA**	**$(x-\bar{x})^2$**	**NPAT**	**TA**	**ROA**	**$(x-\bar{x})^2$**
62/63	30877	1176183	263	0.1404	1827	890984	0.22	3.5721
63/64	37378	1630369	2.30	0.0025	14003	1079290	1.30	0.64
64/65	51149	2151356	2.38	0.0169	14427	1234155	1.17	0.8649
65/66	52101	2812702	1.85	0.16	89605	1626480	5.51	11.6282
66/67	85819	4089190	2.10	0.0225	32445	1561116	2.20	
Total			**11.26**	**0.3463**			**10.29**	**167051**
Average ($\bar{x}$)			**2.25**				**2.10**	
SD (σ)			**0.26**				**1.83**	
CV			**0.12**				**0.87**	

Average $(\bar{x}) = \frac{\sum x}{n}$

AFCL = $\frac{11.26}{5} = 2.25$ POFCL = $\frac{10.29}{5} = 2.10$

SD $(\sigma) = \sqrt{\sum \frac{(x-\bar{x})^2}{n}}$

AFCL = $\sqrt{\frac{0.3463}{5}} = 0.26$ POFCL = $\sqrt{\frac{16.7051}{5}} = 1.83$

CV = $\frac{\sigma}{\bar{x}}$

AFCL = $\frac{0.26}{2.25} = 0.12$ POFCL = $\frac{1.83}{2.10} = 0.87$

AAPENDIX-16

Net Interest margin (NIM) (Rs in '000)

AFCL					**POFCL**			
FY/Particular	**Net I**	**NEA**	**NIM**	**$(x-\bar{x})^2$**	**N.I**	**NEA**	**NIM**	**$(x-\bar{x})^2$**
62/63	64182	1091938	5.88	0.7569	33723	710661	4.75	1.7424
63/64	72317	1532271	4.72	0.0841	47812	825556	5.80	0.0729
64/65	88320	1991438	4.44	0.3249	48200	860214	5.60	0.2209
65/66	96841	2636179	3.67	1.7956	85081	1169415	7.30	1.5129
66/67	185621	2920275	6.36	1.8225	94256	1366770	6.90	0.6889
Total			**25.07**	**4.7840**			**30.35**	**402380**
Average ($\bar{x}$)			**5.02**				**6.07**	
SD (σ)			**0.98**				**0.92**	
CV			**0.20**				**0.15**	

Average $(\bar{x}) = \frac{\sum x}{n}$

AFCL = $\frac{25.07}{5} = 5.01$ POFCL = $\frac{30.35}{5} = 6.07$

SD $(\sigma) = \sqrt{\sum \frac{(x-\bar{x})^2}{n}}$

AFCL = $\sqrt{\frac{4.7840}{5}} = 0.98$ POFCL = $\sqrt{\frac{4.2380}{5}} = 0.92$

CV = $\frac{\sigma}{\bar{x}}$

AFCL = $\frac{0.98}{5.01} = 0.20$ POFCL = $\frac{0.92}{6.07} = 0.25$

AAPENDIX-17
Price Earning Ratio P/E ratio

(Rs in '000)

FY/Particular	**P/E of AFCL**	**$(x-\bar{x})^2$**	**P/E of POFCL**	**$(x-\bar{x})^2$**
62/63	12.95	393.2289	90.80	3322.3696
63/64	22.48	106.09	17.78	444.3664
64/65	58.73	673.402	19.01	394.0225
65/66	49.30	272.9104	11.84	730.0804
66/67	20.43	152.5225	26.39	155.5009
Total	**163.89**	**1598.1538**	**165.82**	**5046.3398**
Average ($\bar{x}$)	**32.78**		**33.16**	
SD (σ)	**17.88**		**31.76**	
CV	**0.55**		**0.96**	

Average $(\bar{x}) = \frac{\sum x}{n}$

AFCL = $\frac{163.89}{5}$ = 32.78 POFCL = $\frac{165.82}{5}$ = 33.16

SD (σ) = $\sqrt{\sum \frac{(x-\bar{x})^2}{n}}$

AFCL = $\sqrt{\frac{1598.1538}{5}}$ = 17.88 POFCL = $\sqrt{\frac{5046.3398}{5}}$ = 31.76

CV = $\frac{\sigma}{\bar{x}}$

AFCL = $\frac{17.88}{32.78}$ = 0.55 POFCL = $\frac{31.76}{33.16}$ = 0.96

APPENDIX- 18

Weighted Average Cost of Capital

FY/Particular	Kd	Ke	WACC	$(x-\bar{x})^2$	Kd	Ke	WACC	$(x-\bar{x})^2$
62/63	4.4	2.5	3.45	1.2321	2.9	0.50	1.72	0.7225
63/64	3.7	0.82	2.26	0.0064	3.5	2.1	2.8	0.0576
64/65	3.8	0.79	2.30	0.0016	3.0	1.9	2.45	0.0121
65/66	2.8	0.54	1.67	0.4489	4.8	0.95	2.88	0.1024
66/67	3.9	0.75	2.03	0.0961	5.7	0.26	2.98	0.42
Total			**11.71**				**12.82**	**1.3146**
Average ($\bar{x}$)			**2.34**				**2.56**	
SD (σ)			**0.596**				**0.513**	
CV			**25.47**				**20.03**	

Cost of debt (Kd) = $\frac{I}{debt} \times 100\ (1-T)$

Cost of equity (ke) = $\frac{ROE}{Equity} \times 100$

Tax = 30%

(Rs in '000)

Debt	Interest	ROE	Equity	Debt	Interest	ROE	Equity
1020037	64182	38.60	156146	803170	33723	4057	87813
1358613	72317	22.65	271755	969474	47812	23.34	109816
1831634	88320	25.37	319721	1109912	48200	24.04	124243
2442258	96841	19.88	370443	1231920	85081	37.34	394560
3294400	185621	12.19	794790	1165311	94256	10.40	395805

WACC = Wd Kdt + We Ke

Average ($\bar{x}$) = $\frac{\sum x}{N}$

AFCL = $\frac{11.71}{5} = 2.34$ POFIL = $\frac{12.82}{5} = 2.56$

SD (σ) = $\sqrt{\frac{\sum(x-x)^2}{N}}$

AFCL = $\sqrt{\frac{1.7851}{5}}$ POFIL = $\sqrt{\frac{1.3146}{5}}$

= 0.596 = 0.513

CV = $\frac{\sigma}{x} \times 100$

AFCL = $\frac{0.596}{2.35} = 25.47\%$ POFIL = $\frac{0.513}{2.56}$ = 20.03%