CHAPTER I

INTRODUCTION

1.1   Background of the Study:

Nepal has agriculture-dominated economy where most of the populations are engaged in farming. Urban areas are dominated by rural areas in Nepal and which are mainly focused on agriculture. Therefore, it is obvious that contribution of this sector in national economy is huge. Nevertheless, in recent years non-agriculture sector is significantly contributing in national economy. Due to political insurgency manufacturing sector is not growing as expected but service sector is growing rapidly. Within service sector banking industry is growing highly than it was anticipated. Banking sector is the most dynamic part of economy which collects unused funds and mobilizes it in needed areas. It is the heart trade of commerce industry. In Nepalese context, commercial banks have comparatively good performance among the public limited companies. The nature of bank fund and its payment depends upon day-to-day operation. Therefore, its operation of fund raising and investments of funds are of short-term nature. In long term, investments are associated with higher risk. Banks are confined to make short-term investments only. V K Bhalla suggests that significance of commercial banks are comparatively greater in lower level of economic development countries.

Generally, Financial institutions collects and mobilize funds into the productive sectors. They have a major responsibility to utilize unused scattered money into development of the nation. In this sense, Financial institutions

occupy a vital role for the development of the countries like Nepal. Banking is

regarded as the backbone of economy. Banking helps to achieve fast economic development by mobilizing the available resources and channeling capital to the productive sector of the economy. Commercial banks are established with the intention of encouraging the commercial sector of the country because the country's well developed commercial sector indicates the healthy economic position.

Financial institution is a profit making organization. One of their major motives is wealth maximization and giving maximum benefits to its shareholders. They collect the resources from the public and play with that money so as to gain profit and distribute more dividends to its shareholders.

Modern economy summarizes that a financial intermediary not a bank which may obtain fund from its own capital recourses by accepting deposits or even by borrowing from other financial institution and which it lends for a variety purpose especially to finance hire purchase contracts but also leasing. The economic development of the nation depends on agriculture , industries and commercial activities. In order to strength these activities, government has to formulate strategy and policy and has to implement them effectively.

No finance companies were started till the amendment of the act in B.S. 2049. Nepal Awash Bikash Bitta Company limited is the first finance company of Nepal which was established just after the amendment of Finance company act BS 2049. In short span of time, lots of finance institution were started like as Agriculture Development Bank, Nepal Arab Bank Limited, Nepal Finance and Saving Company Limited etc. Now more than 60 finance companies are working in Nepal. High Interest rate on deposits, Low administration cost, fast service, less liquidity and high demand for consumer credit are the main reasons that the finance companies are successfully running and growing up day by day.

Currently, 78 finance companies in Nepal have been operating in different

13 districts as per NRB. 49 Finance companies have been operating in

Kathmandu district with 73% paid up capital out of total Finance companies. Similarly 6 Finance companies have been operating in Kaski and same in Lalitpur. But the percentage of paid up capital of the companies in Kaski district is higher than Lalitpur district by 7%. And rest of other Finance companies are located in Rupendehi(4), Parsa(3),Makawanpur(2) and Saptari(2), 1 each in Kavre, Bhaktapur, Dhanusa, Sunsari, Kailali and Dang with 10% paid up capital out of total finance companies in Nepal.

Six finance companies are registered in Kaski district, They are:

Annapurna Finance Ltd.

Pokhara Finance Ltd.

Om Finance Ltd.

Fewa Finance Ltd.

Api Finance Ltd.

Kaski Finance Limited

Annapurna Finance Ltd has been operating its activities since 30-09-1993 A.D. with Rs 704.3 million paid up capital. Pokhara Finance, Om Finance, Fewa Finance, Api Finance and Kaski Finance has started their service in 16-03-1997 A.D. with Rs 240 million paid up capital, 17-09-2000 A.D. Rs 105 million paid up capital, 30-04-2003 A.D. with Rs 271.7 million paid up capital, 25-04-2007 A.D. with Rs 60 million paid up capital, 30-07-2007 A.D with Rs 150 million paid up capital respectively.

Annapurna Finance is the largest Finance company on the basis of paid up Capital, and Api Finance is the smallest one. The finance companies established in Pokhara having experienced more than 5 years are Annapurna Finance Co.Ltd., Pokhara Finance Ltd., Om Finance Ltd., Fewa Finance Ltd. The smallest finance company, on the basis of minimum 5 years experience and paid up capital, is Om Finance ltd and the less experienced is Fewa Finance within the group of having experience more than 5 years. Researcher have

selected those two finance companies one of which has low experience

and more paid up capital and another one having high experience and low paid up capital.

Om Finance Limited is one of the pioneer & leading finance companies of the Pokhara. It was registered in 2054 B.S. by the group of highly reputed & skilled board of directors. In 29th Bhadra 2057 B.S., Nepal Rastra Bank provided the License of finance company, thus, Om finance started its operation from 1st Ashwin 2057 B.S. The head office of this finance limited is situated in Newroad, Pokhara. From its starting phase, Om Finance Limited is trying to bring motivation in the economic condition of the country, establish economic favour to every individual and utilize the freezed capital of the country, plan and invest in an ordered (step by step) manner & upgrade the economical policies of Nepal.

Om Finance Limited is providing the cutting edge facilities to Pokhara Valley as per market demands to fulfill the basic to every level of customer demands. The services provided by the finance is trustworthy, protective and easy financial services. Famous and successful industrialists, businessmen, social workers and people having years of experience in financial sector of Pokhara are promoting the company. Om Finance Limited has its head office in Newroad, Pokhara and branches have been operating in Beshisahar, Lamjung and Bagdurbar, Kathmandu. The company has been planning to open its new branches in Kahukhola, Bagar, Rambazar in Pokhara and Damauli branch in Tanahun district.

Fewa finance limited is established under the company act 2053 and licensed by Nepal Rastra bank in 2060 baishak 17. The head office is located in chipledhunga, BP chowk, pokhara. The promoters of fewa finanace include successful businessman, traders, social workers and professionals having long experience in finance. Fewa finance is equipped with modern technologies and it is providing fast and quality service to the valued clients. Due to the immense

support, belief and help, fewa finance is rapidly extending its services. Capital

Structure of FFL is formed with Rs 700 million in authorized Capital , Rs 273 million in issued capital and paid up capital each.

Fewa Finance limited is established to provide financial support to different productive and needy sectors by collecting the small and large savings all around the country for the overall development of the nation under the free economy policy of the Nepal government. Other features of FFL is national level financial institution, first financial institution of pokhara managed by professionals having long experienced in NRB and other commercial banks, promoted by reputed businessman and people, modern computerized and managed accounting system, profitable since the opening of the company Future plans of FFL are to provide the services to all ethnic group, all places and al kinds of people, Fewa finance is opening its branches in different parts of the country, paid up capital will be increased according to direction of Rastra Bank, right shares will be issued, different facilities like 365 days banking, ATM service and ABBS services will be launched soon.

Fewa Finance Limited has its head office in Chipledhunga, BP Chowk Pokhara , Nepal and branches have been operating in Sundhara, Kathmandu and Pardi Birauta, Pokhara. The company has been planning to open its new branches in different places. They are Amarshingchowk branch and Bagar branch in Pokhara and Maharajgunj Branch.

1.2   Focus of the Study:

This study is based on comparative study of investment portfolio of the Om Finance co. and Fewa Finance company. Nowadays finance companies are growing day by day in Nepal even the world has been suffering from the depression since more than couple of years. Therefore it is considerable that how the finance companies in Nepal are still in stable position? The investment done by the finance company is guided by several principles such as their purpose, length of time, profitability etc. Are they earning as per their planning? Where

the investment has been involved? These types of queries

must be settled and the sound policies should be formulated for their sustainable growth.

Therefore this study focuses on alternatives of investment structure, investment decision process, trend of investment process and analysis of each part related to investment structure. Existing process, situation, structure and results are carefully observed on the basis of decision science. Decision science prefers more and more alternatives, analyze them and select best alternative.

Normally Finance company's return depends upon the market risk and return. So here risk and return are critically examined with market risk and return through financial and statistical tools.

1.3   Statement of Problem:

Investment portfolio is the combination of different types of assets through which investors maximize the return and minimize the risk. Formation of optimum portfolio plays a vital role in the profitability position of the organization. Thus investment activities are needed to analyze effectively.

Kaski is the second largest district having large no. of finance co. in Nepal. And the district has 12% paid up capital of total finance companies in Nepal. It means there are lots of possibilities of making investment in different sectors of this district.

No. of financial sectors have been investing in real state from last few years. And the return from the loan is also assumed comparatively strong and profitable than others. In general, it was found that the price of the real states was increasing rapidly than its original rate and so far it was felt that it would create inadequate liquidity position in future. In current situation it is becoming hot concern for real state investors and financial sectors that the regulatory body of Financial sectors in Nepal announced some limitations regarding the issue from the circulation of 2066 Push 02.

Om Finance Limited was established before 10 years and is the second oldest finance company in Kaski district. Likewise, Fewa Finance company has also been operating in 7 years. As the companies are well established in this sectors, what the profit strategy they have and what the position they have been attaining is the matter to be analyzed.

Through lot of challenges, how the companies have been attaining success, what is the portfolio of investment they have been using? Therefore we feel the gap of investment portfolio analysis they have been creating since the starting point of the company which must be fulfilled.

1.   What are the different investment sectors of the co. and their trends in five years?

2.   What are the merits and demerits of the setting criteria in investing sectors especially; real estate?

3.   What is the profitability position of each company?

4.   What is the position of investment portfolio risk and return of each company?

5.   How the portfolio has been performing since last 5 years?

1.4   Objectives of the study:

1.   To analyze and compare different sectors of investment and their trends.

2.   To find out the merits and demerits of setting criteria for the investment on real state.

3.   To measure and compare the profitability position.

4.   To find out and analyze investment portfolio risk and return.

5.   To measure and analyze portfolio performance.

1.5   Significance of the Study

It is important for the researcher to study this topic for the fulfillment of the Master degree. Apart from this, this study helps to understand the practice of investment portfolio of finance companies and shows the probability of different options for investment. Instantly researcher hopes that the study helps in the following ways:

Helps to know the diversification of investment.

Helps to improve investment portfolio to minimize the risk .

Helps to anticipate the profitability position in different portfolio.

Helps to provide useful feedback to shareholders

Helps public to make investment decision in the shares of the co.

1.6   Limitation of the Study

As we know every study has its own limitation, This study of Investment portfolio also have some limitation which we can't overlook. The limitations are as follows:

1. The study is a partial fulfillment of MBS degree which is prepared within time constraint.

2. Annual report of the company is mainly used as Secondary data.

3. Five continuous year period up to 065/66 is covered in the study.

4. The study doesn't pay any attention to other aspects of the company rather than investment portfolio.

5. The study is focused on loan and advance of the companies (as loan and advance is the huge part of financial institution which covers more than 95% investment of OFL and FFL).

1.7   Research Gap

Lots of researches can be found easily on the topic of Investment, that may be Investment policy or Investment structure or Investment trend and also obviously may be Investment portfolio. But most of the dissertations were conducted on Banks. As Finance company is one of the financial sector, we cannot find much researches on Finance company. Finance companies have lots of chance to carry out rare financial activities in where the funds they have been using may be one of be the researchable part. Among 78 finance companies, 49 companies are located in Kathmandu district and rest are in Kaski and other districts where Kaski district have six finance companies. Generally it is assumed that the company having experience more than 5 years are eligible to analyze the trend of different aspects. Therefore we have selected those two finance companies one having low experience and more paid up capital and vice versa position for another; Om Finance limited and Fewa Finance limited respectively. No comparative researches were made before on the investment analysis of those companies.

Those who made researches on investment portfolio in past couldn't cover the hot issues of the investment that have been waiting for answers. Every researches on the topic were surrounded only on liquidation and profitability position of company. Including them researcher has made effort to find out the reason behind the limitation of investment on real state which is hot issue nowadays.

Therefore the researcher found the research gap in four ways;

a.   Investment portfolio of the companies weren't analyzed together in any dissertations before even though the companies are leading finance companies in Kaski district .

b.   Comparative study on investment portfolio were rarely analyzed before this study. The researcher here is going to analyze different

aspects of the companies comparatively.

    c.   The researcher thinks that all the issues must be included in the concerned dissertation if any issue at the time of the study is raised in the market related to the dissertation topic. As such issues are truly a behavioral part of the study, they must get space in the dissertation according to the weight they have. But the researcher could not find out such inclusive study on Investment portfolio therefore the researcher has included the recent hot issue of financial sector in this study ie, setting criteria on investment in real state by NRB.

    d.   No one researcher has measured portfolio performance of the company. They focused only on risk, return and profitability position of the company.

Addition to the gap, researcher found that every researcher used financial ratios only to find out the objective of the study. But the researcher in this research has measured the portfolio performance by using Sharpe's performance measurement which is quite new search for this topic in Masters Dissertation. All the gaps found by the researcher must be fulfilled in the context of investment portfolio analysis which was overlooked in past dissertations.

1.8   Organization of the study

The whole study is divided in to five chapters.

Chapter I   Introduction:

It includes Background, Focus of study, Statement of Problems, Objectives of the Study, Importance of the Study and Delimitation of the Study.

Chapter II   Review of the Literature:

It includes concept and theoretical review and review of researched studies.

Chapter III   Research Methodology:

It includes Research Design, Population and Sample, Source of Data, Data Collection Technique, Data Analysis Tools and Limitation of the Methodology.

Chapter IV   Data Presentation and Analysis:

It includes data presentation and major findings of the study.

Chapter V Summary, Conclusion and Recommendation:

The last chapter recapitulates the whole study, reviews the major finding and makes recommendations.

CHAPTER II

REVIEW OF LITERATURE

Review of Literature consists of study of past research studies and relevant information that they used and induced. It is an advancement of existing knowledge and in-depth study of subject matters. It starts with a search of a suitable topic and continuous throughout the volumes of similar or related subjects. This chapter deals with the review of the financial system and investment opportunity with more details are in descriptive manner. For this study, various books, journal and articles as well as the past thesis review were taken into consideration. During the review of this research, in depth study and theoretical investigation regarding portfolio's aspects and their present application and potentialities are studied.

2.1   Conceptual Review

Portfolio management is the process of selecting different investment sectors that provides the organization a maximum yield for a given level of risk or alternatively ensuring minimum level of risk for given level of return. It can also be taken as risk and return management. It aims to determine an appropriate asset mix which attains optimal level of risk and return. Various books, which are either dependent or independent deals with theoretical aspects of risk, return and portfolio, are taken into consideration in this chapter.

2.1.1 Conceptual review of Investment and Portfolio analysis:

The common definition of investment is the sacrifice of certain present

value for future value. Investment is not a gamble rather it is the systematic and

scientific way of using the excess fund to get the maximum return at minimum level of risk. Investment is done to obtain some expected profit. Investment forgives the present return for future return. Present investment is contribution to the future return. It is systematic and scientific way of using available fund for short or long term in order to gain expected return in future period. While expecting future return one should not forget that the amount s/he investing i.e. capital, a collective form of surplus. The surplus is that part of money deducting all the expenses from income. A person spends his/her years in capital formation process. That is why each one should be rational while investing. Since most of investors are risk averters, they require additional unit of return for bearing one more level of risk. People always try to reduce the risk factor. Common definition say us that contribution of present value for future return is investment or it's a search of certainty within the uncertainty. An investment is a commitment of money that expects to generate additional money. Every investment entitles some degree of risk; it requires a present sacrifice for a future uncertain benefit. The motivating factor of investment is collective form of saving, expectation of future return and wealth position maximization.

Investors undertake investment with the target of making some expected rate of return. For making more return, they diversify their investment across different sectors rather than invest in one. Risk diversification creates an efficient investment thereby reducing the variability of return around the expected return. The reduction in risk will occur only if the returns within the portfolio do not move precisely together over time- that is, if they are not perfectly correlated.

A portfolio is collection of investments of the company. Portfolio theory deals with the selection of optimal portfolio; that is, portfolio that provides the highest possible return for any specified degree of risk or the lowest possible risk for any specified rate of return.(Western and Copeland, 1992)."A portfolio

simply represents the practice among the investors of having their funds in

more than one asset. The combination of investment assets is called a portfolio."(Western and Brigham, 1996). In simple w ords, portfolio means the list of investment owned by an investor or institution, which provides maximum return at minimum risk. So an investor should always have good knowledge of portfolio analysis as it considers the future return and risk and helps to develop a portfolio that provides the maximum return at given level of risk.

2.1.2 Portfolio Management and its objective

Portfolio management theory seeks to make risk-adjusted returns and take full advantage of portfolios through evaluation, diversification, and other asset management strategies. Financial management is one of the most common areas of application of portfolio management theory. Portfolio management theory helps investment managers to create a portfolio of investments to meet the current financial goals of the company. One of the fundamental principles of portfolio management theory is to yield value to the business and manipulate existing value to enhance returns. It is a theory on how investors can construct portfolios with a view to optimize market risk and derive more returns from a business.

Portfolio management is the process of defining portfolios, evaluating, tracking and studying portfolio performance, and reporting results to stakeholders. Portfolio management involves the balancing of risks and rewards for getting greater returns. Companies employ portfolio management to efficiently manage their resources. Portfolio management theory states that every project should be analyzed for risks involved and the returns expected. Successfully applying the portfolio management theory in practice helps a company to get expected and higher return through balancing of risk in different positions.

Portfolio theory deals with the selection of optimum portfolio. Only the optimum portfolio provides the highest possible return for any specified degree

of risk or the lowest possible risk for any specified rate of return. In order to develop the optimum portfolio, the investor should have good knowledge of portfolio management. It is concerned with efficient management of funds allocated in different sectors of investment which derives the co. to achieve long term and short term profit goal. It involves a logical set of steps to evaluate return with risk associated portfolio. It is just an attempt to be made by an investor to take a decision of maximizing return at lower risk. Before taking decision, investor must have some knowledge about the objectives of portfolio management which can be categorized as:

Primary Objectives

- To maximize return
- To minimize risk.

Secondary objectives

- Regular return.
- Safety or security of an investment.
- Appreciation of capital.
- Liquidity.
- Marketability.
- Tax planning – capital gain tax, income tax and wea lth tax.

The main objective of portfolio construction is to diversify the risk by combining different investment of low risk with the investment of high risk to obtain the highest expected return for a given level of risk. One of the well-said proverbs "never keep all the eggs in a same basket" supports this. So diversification plays an important role in designing efficient portfolios (that is portfolios whose return is maximum for a given level of risk or, equivalently, portfolios whose risk is minimized for a given level of return.).

Diversification simply means spreading the risk among the various companies' assets or investment. It reduces the portfolio risk thereby eliminating

the unsystematic risk, which is not rewarded. There are two types

of risk attached with investment; systematic and unsystematic risk. The investors are only rewarded for systematic risk that is market risk, which is unavoidable. It is important to investors as it protect them from business risk, financial risk and the volatility. There are different types of diversification risk management techniques that help in reducing portfolio risk.

2.1.3 Portfolio Risk

Investors must bear risk in order to gain profit. Investors must have knowledge and awareness on the types of risks while making investment. For any investment, following types of risk are relevant (Weston, Bringham, 1996):

- Financial Risk |
- Business Risk |
- Management Risk |
- Default Risk |
- Interest Rate Risk |
- Purchasing Power Risk |
- Liquidity Risk |

Portfolio risk is a combined risk that is generated through investment in different sectors. The riskiness of the portfolio is subjected by the relation between two or more investment sectors within the portfolio. It is measured by standard deviation. The risk of a portfolio is not a simple weighted average of the standard deviation of the individual securities. It depends on the investment weight on individual security.

Risk Investors can reduce portfolio risk by investing sort of securities in the portfolio. Risk is divided into two parts according to their natures:

a) Systematic Risk:
    Unavoidable risk.
    Cannot reduce.
    Generally generated from outside the company.

Beta is the index of systematic risk.

b) Unsystematic Risk

Avoidable risk

Can be reduced

Risk generated within the company

The total risk is the combination of the risks mentioned above and denoted by standard deviation.

Total Risk = systematic risk + Unsystematic risk

Portfolio risk is generally measured by statistical tool standard deviation and variance. Portfolio is a function of the proportions invested in the components where the riskiness of the components computed by using the following equations:

In case of two assets:

$$\exists_p \ X\!\!\!| \ \sqrt{W_A^2 \dagger_A^2 \ \Gamma \ W_B^2 \dagger_B^2 \ \Gamma \ 2W_A W_B \ Cov(R_A, R_B)} \ 1$$

1

In case of three assets:

$$\dagger_p \ X\!\!\!| \ \sqrt{W_A^2 \dagger_A^2 \ \Gamma W_B^2 \dagger_B^2 \ \Gamma W_C^2 \dagger_C^2 \ \Gamma 2W_A W_B Cov(R_A, R_B) \ \Gamma 2W_A W_C Cov(R_A, R_C) \ \Gamma 2W_B W_C Cov(R_B, R_c)}$$

And so on for more than 3 assets case.

Variance = $\dagger_p^2$

Where,

$Cov(R_A, R_B)$ = Covariance between investment A and B

And same as for other covariance

$W \ X \ Weight$

$\exists_p$ = Standard deviation of portfolio.

A and B denotes investment sector or assets.

2.1.4 Return

Return is the main motivating force of the investment or return is the reward of investment. In return, there are two factors one is capital gain and

another is regular gain or ordinary gain. Capital gain means difference between the ending and beginning price. Regular gain means annually cash receipt.

Total return = Capital gain + regular gain (ordinary gain)

Capital gain = ending price – beginning price

Regular gain = dividend or interest.

2.1.4.1 Single Period Rate of Return

The rate of return is the speed at which the investor's wealth increases or decreases. This rate of return depends upon the future cash flows that include cash receipt (dividend) and capital gains and the investors make investment for high rate of return at minimum risk. Thus, the investor's single period rate of return can be defined as the total return that the investor receives during the holding period and the single period return generally denoted in percentage. It can be called holding period return (HPR). But this type of return isn't used in our study.

2.1.4.2 Required Rate of Return

While setting the required rate of return on an investment an investor have to consider the real rate of return, expected inflation and risk. Because consumption is foregone today, investor is entitled to a rate of return that compensate for different consumption in future. Required rate of return is the rate of return demanded by an investor forgoing the present utility and satisfaction. If investors postpone his satisfaction for uncertain future, investment must compensate his satisfaction. The compensation that is demanded on behalf of future uncertainty over the risk is the required rate of return. The capital market determines required rate. The required rate of return is the minimum rate of return that an investor expects from his investment. It is function of real rate of return and risk.

2.1.4.3 Expected Rate of Return

Expected rate of return is the return one expects by his/her investment. Suppose one invested Rs 100 in security and he/she thinks that it will generate year-end dividend of Rs 5 with ending price of Rs 110 then its total return will be Rs 15 and expected return will be 15%. The expected rate of return should be higher than required rate of return. Expected return is the hypothetical rate of return. The expected rate of return is based upon the expected cash receipt over the holding period and expected year-end selling price of the securities. It is obvious that, an investor's expectation on return must be reasonable as most expectation based on history. Reasonable conclusions about future returns can be gained by looking at the past as past history is one of the better forecasting way. Even if expectations are reasonable, however, there are the possibilities that investment's actual return will be different from the expectation.

2.2.4.4 Portfolio Return

Since each investment's future may be considered as a variable, the return of a portfolio also can be thought the same way as variable depended on expected returns of the individual investment that make up the portfolios. The expected return of portfolio is a weighted average return of the stocks or investment sectors in a portfolio where weights being the proportion of funds invested in individual investment of the portfolio. The expected returns of a portfolio should depend on the expected return of each security contained portfolio. It also seems logical that the amount invested in each security should be important. The multiplication between proportion of individual sector's investment weight and the returns is the process to calculate portfolio return:

In case of two assets case:
$$\overline{R}_p \text{ X} W_A \ulcorner R_A \ \Gamma \ W_B \urcorner R_B$$

In case of more than two assets case:
$$\overline{R}_p \text{ X} W_A \ulcorner \overline{R}_A \ \Gamma \ W_B \urcorner R_B \ \Gamma \dots \Gamma \ \overline{Wn} \mid Rn$$

Where,

W X *Weight*

$\overline{R}_p$ X *Portfolio* Re *turn*

A and B denote investment sector or assets.

2.1.5 Portfolio Performance Measurement

Risk and return should be considered by giving important priority when considering a portfolio performance. Due to absence of either risk or return, we cannot measure their performance of portfolio effectively. There are various methods applied to measure the portfolio performance like Sharpe's, Treynor's and Jensen's measurement. Among them, one of the important techniques i.e. Sharpe's portfolio performance measure is considering here in this study:

2.1.5.1 Sharpe's Performance Measure

William Sharpe is the founder of Sharpe's portfolio performance measurement. It helps to know the return that is generated with per unit of total risk. This measurement can be attained after deducting risk free rate of return from portfolio return and divided by total risk of portfolio:

$$S_P \ X \frac{\overline{R}_j \ Z \ \overline{R}f}{\dagger 1_j}$$

Where,

S_P = Sharpe's Portfolio Performance Measure for portfolio 'J'

$\overline{R}_j$ = Average/ Expected return from portfolio 'j'

$\exists_j$ = Standard deviation of returns for portfolio 'J'

$\overline{R}f$ = Risk free rate of return.

2.1.5.2 Treynor's portfolio Performance Measure

Another index of portfolio performance i.e. similar to the Sharpe index is the Treynor's performance index. The Treynor's i ndex however is concerned with systematic risk, while the Sharpe index is concerned with total risk as measured by portfolio standard deviation of return. The Treynor's index is defined as follow:

$$T_P \ \text{X} \frac{\overline{R}_j \ \text{Z} \ \overline{R}f}{\text{s1}_j}$$

Where,

T_P = Treynor's Portfolio Performance Measure for portfolio 'J'

R_j = Average/ Expected return from portfolio 'j'

s_j = Systematic risk for portfolio 'J'

$\overline{R}f$ = Risk free rate of return.

2.1.5.3 Jensen Performance Measures

Michael Jensen has developed a method for evaluating a portfolio assets performance. Jensen's measures are the average return of the portfolio over and above that predicted CAPM, given the portfolio's beta and the average market return. Jensen's measure is the portfolio alpha value. The Jensen's measures are computed with regression equation.

$$A_p \ \text{X} R_p \ \text{Z} R_f \ \Gamma [E (R_m) \ \text{Z} R_f] \text{s}_p$$

Where,

A_p = Jensen's alpha of portfolio or Jensen's performa nce measures.

R_p = Average realized return from portfolio.

R_f = Risk free rate of return.

$E(R_m)$ = Expected market return.

β_p = Beta portfolio. 1

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2.2 Review of Dissertations

"Comparative Analysis of Investment Structure of Ra striya Banijya Bank and Nepal Bank Ltd." (Adhikari, 2043) in 2043 B.S. was conducted by Lal Mani Adhikari. The main objective of the study was to find out the comparative structure of the selected banks. Correlation between deposit and investment in NBL found higher than RBB. Unless the deposit structure were same, RBB had maintained percentage of loans, advances and borrowing higher than NBL. Finally he has concluded that NBL is better than RBB regarding investment structure.

There are few dissertations made in Investment portfolio. Investment portfolio in Annapurna finance company and Pokhara Finance company has prepared on 1999 AD and 2006 AD by Pitambar Sapkota and Sheleena Shrestha respectively. The main objective of both studies were to analyze investment portfolio and profitability position of the company.

Pitambar Sapkota covered five years for his study from FY 1993/94 to FY 1997/98.Current ratio, return on capital, return on net worth, earning per share and return on total assets were the financial tools used by the researcher. With the objectives of analyzing investment portfolio, liquidity and profitability position, he concluded that the company did not sufficiently diversify its investment as much as possible in order to reduce its portfolio risk. He found that the company had emphasized on hire purchase loan rather than housing, term and fixed deposit loan.

Similarly, objective of the study conducted by Sheleena Shrestha were to analyze the liquidity position, profitability position and risk and return of the company. The study covered total six years period beginning from FY 2055/56

to 2060/61. She used different tools for the findings; Liquidity ratio, Loan loss

ratio, activity ratio, profitability ratio, growth ratio for financial tools and Mean, standard deviation, coefficient of variation and correlation for statistical tools. Finally the researcher found that the company has emphasized Loan and advances rather than investment on government securities and share and debentures. And also the highest preference was provided to term loan and least priority to fixed deposit loan. Hire purchase and housing loans were issued in average between those loan in the period. Further she concluded that positive return had been maintaining by the company regarding profitability position and the company had managed its resources efficiently as to maximize the return and minimize the risk regarding investment.

"An Analysis of Financial performance of finance c ompanies in context of Nepal" (Rana Bhat, 1997) has conducted by Min Ra na Bhat on 1997.To analyze financial performance of finance companies in Nepal was the main objective of his study. He used comparative study, index and percentage change. Five years period was covered in his study. He concluded housing and real state loans were not attaining good position but hire purchase was found satisfactory.

Basnet: (2002), Conducted a study on "Portfolio Management of Joint Venture Banks in Nepal" based on four joint venture banks. They were Nepal Bangladesh Bank Ltd.(NBBL), Standard Chartered Bank Ltd.(SCBNL), Himalayan Bank Ltd.(HBL) and Everest Bank Ltd.(EBL) The general objective of this study is to identify the situation of portfolio management of joint venture banks in Nepal.

The major findings of this study are given below:

- On ratios of Everest Bank Ltd. was more consistent among the four joint venture banks. |
- SCBNL did not invest its fund on NRB bond after 1997 and no government securities after 1998. |

- HBL did not investing its fund in NRB bond after 1997 and investing very high amount of fund on government securities. |

- Nepal Bangladesh Bank limited invested very high amount of its fund in government securities. Everest Bank limited did not invest its fund on NRB bond after 1997 but it invested high amount of fund on government securities. |

- SCBNL provided very high amount of its loans & advances to the private sector. It had also given the second priority to foreign bills purchase and discount. |

- HBL provided very high amount of its loans & advances to the private sector in increasing trends. It had also given the second priority to foreign bills purchase and discount. |

- NBBL provided very high amount of its loans & advances to the private sector. It had also given the second priority to government securities by providing very low amount of loans to the foreign bills purchase and discount. |

- EBL provided very high amount of its loans & advances to the private sector and had given the second priority to the foreign bills purchase and | discount. It did not providing amount of loans & advances to government enterprises.

Khaniya (2003), Conducted study on "Investment Portfolio Analysis of Joint Venture Banks" has been done in 2003. The stu dy was based on five joint venture banks and they were Nepal Arab Bangladesh Bank (NABIL), Standard Chartered Bank(SCBNL), Himalayan Bank (HBL), Nepal Bangladesh Bank (NBBL) and Everest Bank(EBL). The general study was to identify the current situation of investment portfolio of joint venture banks in Nepal.

The major findings of her study are below:

- SCBNL and HBL had better position. NBBL and NABIL had a low

position in the industry. But Everest Bank had a very low position in the |

industry because of having lowest mean return on shareholders' fund resulting from the negative returns in the fiscal years 1995/96 and 1996/97.

- SCBNL has the highest mean return and EBL had the lowest return. Except EBL, all the four banks i.e.; NABIL, SCBNL, HBL and NBBL had good performance.

- Among other joint venture banks, SCBNL had the highest return and EBL had mean return than industry average. SCBNL, EBL mobilized the funds in investment title was higher than the standard ratio.

- NABIL, SCBNL & HBL had invested low amount of deposits on loans and advances which was lower than industry average and NBBL & EBL had invested a high amount of deposits to loans and advances title which was higher than industry average.

- SCBNL had the highest EPS and EBL has the lowest EPS. Similarly, HBL also had above mean EPS than industry average and that of NBBL was lower than industry average.

- Himalayan Bank had the lowest beta coefficient among the five joint venture banks which means that the systematic risk of Himalayan bank was the lowest among the JVBs. The portfolio return of NBBL is 94%. This return was average capital gain yield and dividend yield.

- The coefficient of correlation between loans and advances in private sector and portfolio return of joint venture banks come out to rxy = -0.6. Therefore, it indicates that there was negative correlation between loans and advances in private sector and portfolio return of five JVBs in Nepal.

Dev Singh Gurung studied "Planning and Controlling of Investment in Financial Institution of Nepal; A case study of Pokhara Finance Limited" (Gurung, 2005) on 2005 which covered five years from 2056/57 to 2060/61. The study was conducted in order to examine and analyze the investment policy, review investment pattern and to find out the source of fund towards re-

investment and fund generation. Subjected to the objective of the study, he

concluded that investment in securities was very nominal than loan and advances, most portion was invested on hire purchase, housing loan, term loan etc, Liquidity position was found satisfactory but investment portfolio was highly risky. To find out these findings, researcher used some financial tools; return on capital, return on net worth, current ratio, earning per share, break even point etc.

"Investment policy and Pratice; A case study of SBI Bank" (Karki, 2005) was studied on Masters dissertation by Deependra Karki on 2005 which covered last five years data. Liquidity ratio, Single borrower credit limit ratio, activity ratio, capital adequacy ratio and growth ratio were the financial tools used to analyze the data. With the objective of analyzing general investment policy, relation between important variable of investment policy, evaluate liquidity, asset management, profit and risk and portfolio behavior were the major objectives of the study. He found that the company had positive correlation between deposit and investment. Adequate liquidity position had been maintaining by the company. Investment focused on income generating assets, higher risk on loans issued to a few large borrowers was the most risky behavior of the company. Loans was provided to industry and commercial sectors rather than lending on service sector. And Increasing trend of loan loss would be very risky for the company.

"A study on Investment policy of Paschimanchal Gram een Bikash Bank" (Sainju, 2006) was conducted by Manoj Kumar S ainju on 2006. By using return on assets, return on capital employed ratio, return on equity, the researcher tried to attain the objective of the study:

- To know about the investment policy

- Gain knowledge about investment areas of the bank

- Assess financial performance

-       Ascertain problem faced by bank

- Provide suggestions

The researcher of the study had concluded that the bank had positive trend on loan and recovery pattern but profitability position of the company was not satisfactory. Use of funds didn't follow in proper manner, resources of financing also had some problem. Therefore investment policy wasn't satisfactory and long term existence of bank was uncertain.

Manoj Baral conducted dissertation on the topic of "Deposit collection and Investment Pattern of MBL" (Baral, 2007) on 20 07. His major objectives of study were to measure the trend of Investment composition of MBL, evaluate liquidity, profitability and risk position, analyze different ratios like as growth ratio, loan and advance, total investment and net profit. The study covered six years from 2000/01 to 2005/06. Liquidity ratio, activity ratio, profitability ratio, risk ratio and growth ratios were used as major tools for finding the outcomes of the study. Finally he concluded satisfactory on deposit collection, investment made on government securities and company's bond, share and debt. And also the bank had made good level of resource utilization in order to attain the profitability position. But he indicated that the bank had been facing lack of sound credit policy which lead to the higher position of risk.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

Descriptive, Trend and Analytical research designs are followed in this study. General pattern of investment, business structure, management of portfolio etc are covered by descriptive research design, grown trend and future predictions are covered through Trend research design and likewise Analytical research design analyzes gathered facts, reports and information.

3.2 Population and Sample

The study is concerned with two finance company's Investment Portfolio among 6 finance company of Kaski district. Being a study of comparison, the study is a comparative study and convenience sampling method is used for sampling purpose.

3.3 Nature and Source of Data

The study is based on secondary and primary data. The data required for analysis are directly obtained from balance sheet, P/L account , other reports , interview etc. Supplementary data and information are collected from number of related institutions, places and articles like: NRB reports and circulations, NEPSE reports, various published subject matters, economic journals, magazines and electronic data.

3.4 Data Collection Procedure

Secondary data is collected from Annual reports, custom report provided by the companies especially for this dissertation, web sites of the company and other sites as well. Primary data are also used according to the objective of the study which is collected through taking interview with concerned management in the current location of the companies.

3.5 Data Processing and Analysis

After collecting data from different sources, data are analyzed critically examine them in order to achieve objective of the study. The analysis of data is done according to the pattern of data available. The collected data are presented in systematic manner with the help of computer. Therefore available data and information are analyzed with the help of different tools and techniques, especially the following tools are used:

- Financial Tools
- Statistical Tools

Beside this, Tabulation, percentage, minor mathematical tools and diagrams are used according to the need and appropriateness of situation to be analyzed.

3.5.1 Financial Tools

Lots of financial tools are used step by step to analyze the objective of this study. Among them we have used some ratio analysis tools and some from portfolio analysis tools.

A) Return on Assets (ROA)

Return on Assets is the ratio which indicates the portion of return over total assets. It is calculated by dividing net profit after tax by total assets.

$$ROA \text{ X} \frac{NPAT}{Total\ Assets} x100$$

Where,

ROA = Return on Assets

NPAT = Net Profit after Tax

B) Return on Equity (ROE)

Return on Equity is the ratio which indicates the portion of return over total equity. It is calculated by dividing net profit after tax by total equity.

$$ROE \text{ X } \frac{NPAT}{Equity} \text{ x } 100$$

Where,

ROE = Return on Equity

NPAT = Net Profit after Tax

C) Return on Investment (ROI)

Return on Investment is the ratio which indicates the portion of return over total investment. It is calculated by dividing net profit after tax by total investment.

$$ROI \text{ X } \frac{NPAT}{Total\ Investment} \text{ x } 100$$

Where,

ROI = Return on Investment

NPAT = Net Profit after Tax

D) Weighted Average Interest Spread Ratio

Interest spread ratio is the ratio which indicates the degree of difference between interest earned and interest paid. Interest spread ratio calculated as under:

ISR = <u>Income from loan portfolio</u> x 100 – <u>Interest Exp. & other financial charges</u> x 100

Average loan portfolio   Average borrowings

Where,

ISR = Interest Spread Ratio

E) Portfolio Return

The expected return of portfolio, $\overline{R}_p$, is simply the weighted average of the expected returns on the individual assets or investment sectors in the portfolio with the weights being the fraction of the total portfolio invested in each asset or investment sector.

In case of two assets case:
$$\overline{R}_p \ \mathrm{X} W_A \ | \overline{R}_A \ \Gamma W_B \ | R_B$$

In case of more than two assets case:

$$\overline{R}_p \ \mathrm{X} W_A \ | \overline{R}_A \ \Gamma W_B \ | R_B \ \Gamma .... \ \Gamma \overline{Wn} \ | Rn$$

Where,

$W \ \mathrm{X} \ Weight$

$\overline{R}_p \ \mathrm{X} \ Portfolio \ \mathrm{Re}\,turn$

A and B denotes investment sector or assets.

F) Portfolio Risk

Portfolio risk is measured by a statistical tool called portfolio standard deviation. This is not a simple weighted average of the standard deviation of the individual securities. Portfolio risk depends not only on the riskiness of the securities constituting the portfolio but also on the relationship among these securities. The portfolio risk is computed by using the following equations:

In case of two assets:

$$\sigma_p = \sqrt{W_A^2 \sigma_A^2 + W_B^2 \sigma_B^2 + 2W_A W_B \, Cov(R_A, R_B)}$$

In case of three assets:

$$\dagger \, x \!\!\!\!\!\!\Big|\, W^2 \dagger^2 \Gamma W^2 \dagger^2 \Gamma W^2 \dagger^2 \Gamma 2WWCov(R_A,R_B)\Gamma 2WWCov(R_A,R_C)\Gamma 2WWCov(R_{Bc},R_{Bc})$$

And so on for more than 3 assets case.

Where,

$Cov(R_A, R_B)$ = Covariance between investment A and

B And same as for other covariance

W X Weight

$\exists_p$ = Standard deviation of portfolio.

A and B denotes investment sector or assets.

G) Sharpe's Performance Measure

It was developed to evaluate a portfolio's performance by William Sharpe, considering both return and risk simultaneously which measures the reward to total volatility trade off. This measure divides average portfolio excess return over the sample period by the standard deviation of return over that period. Sharpe's Performance Measure can be defined by this equation:

$$S_P \; X \frac{\overline{R}_j \, Z \, \overline{R}f}{\dagger 1_j}$$

Where,

S_P = Sharpe's Portfolio Performance Measure for portfolio 'J'

$\overline{R}_j$ = Average/ Expected return from portfolio 'j'

$\exists_j$ = Standard deviation of returns for portfolio 'J'

$\overline{R}f$ = Risk free rate of return.

H) Treynor's Performance Measure

It was derived by Jack Treynor. This measure is also used to measure portfolio performance. The difference between Sharpe's and Treynor's performance measure is that Sharpe measure gives excess return per unit of total risk but Treynor measure results excess return per unit of systematic risk.

$$T_P \; X \frac{\overline{R}_j \; Z \; \overline{Rf}}{sl_j}$$

Where,

T_P = Treynor's Portfolio Performance Measure for portfolio 'J'

R_j = Average/ Expected return from portfolio 'j'

s_j = Systematic risk for portfolio 'J'

$\overline{Rf}$ = Risk free rate of return.

3.5.1 Statistical Tools

Lots of Statistical tools can be used to conduct study on portfolio management. According to need of our objective of study, we, here, are using the tools explained below:

A) Mean

A mean is simply the average value of the sum of all observation divided by the number of observation and it is given by formula below.

$$Mean(\overline{R}) \; X \frac{\sum_{iXl}^{n} \kappa}{n}$$

Where,

$$\sum_{iXl}^{n} \kappa \quad = \quad \text{Sum of the values.}$$

n   =   Number of pairs of observations.

B) Standard Deviation(S.D.)

Standard deviation is the statistical measurement of the variability of a distribution of return around its mean .it is the square root of the variance and measures the total risk on investment. Sigma sign denote it (†).

Symbolically,

$$\sigma_j = \sqrt{\frac{\sum_{i=1}^{n}(R_j - \overline{R_j})^2}{n}}$$

Where,

σ_j = Standard deviation of returns on investment 'j' during the period n.

C) Coefficient of Variation (CV)

The Co-efficient of Variation is defined as the standard deviation divided by the mean of expected return. It is used to standardize the risk per unit of return. In other word, it is the ratio of standard deviation of returns to the mean of that distribution. It gives the result regarding the unit of risk to bear for earning 1 unit of return.

Symbolically,

$$\text{C.V.} = \frac{\sigma_j}{\overline{R_j}}$$

Where,

σ_j =   Standard deviation of investment j

$\overline{R_j}$ =   Mean Return of investment j.

D) Beta

Logically, the systematic risk is covariance between the return of an individual asset or portfolio and the return of the market portfolio. The measure of systematic risk is represented by beta. It is an index of systematic risk, which cannot be eliminated through the means of diversification. It measures the sensitivity of an asset/investment's return on the market portfolio.

Symbolically,

$$\beta_j \ X\frac{Cov(R_i, R_m)}{\dagger 1_{m_2}}$$

Where,

β_j = Beta co-efficient for stock 'j'.

$Cov(R_i, R_m)$ = Covariance between returns on stock j and return of market.

$$Cov(R_j, R_m) X\sum \frac{(R_i - \overline{ZR_j})(R_m - \overline{ZR_m})}{n \ Zl}$$

$\exists_m{}^2$ = Variance of market return.

An asset or a portfolio with a beta grater than 1 is considered to be aggressive (more risky than the market). An asset or portfolio with a beta less than 1 is considered to be defensive (less risky than the market). Beta coefficient of market is always equal to 1.

E) Correlation Coefficient

The correlation is also a measure of the relationship between two assets. It can be taken on a value ranging from −1 to +1. Correlation and co- variance are related by the following equation.

Symbolically,

$$\ldots_{ij} \ X\!\mid\! \frac{Cov_{ij}}{\dagger1_i\dagger1_j}$$

Where,

$\exists_i$ and $\exists_j$ are standard deviations of returns for assets I and j.

∂_{ij} = Correlation co-efficient of assets i and j.

3.6   Limitation of the Methodology

Every study is bounded by its own methodology and cannot be free from limitation. Because this study only relates with Investment portfolio of Om finance company and Fewa Finance company, the study becomes comparative study in where sampling method can be used. In such situation convenience sampling method is used which isn't free from criticism, every financial aspect of the company can't be covered. Data are normally collected upon certain assumption and tools are used to analyze them, therefore the reliability of analysis depends upon available data. **Sharpe's Performance Measure is only used to evaluate portfolio's performance** . Similarly **S.D. is used to measure the risk of portfolio investment**. And the portfolio performance analysis is generally used for stocks and assets in favor of individual investors but here performance analysis is used for ranking the company as per their investment in loans and advances and which cant be generalized. Being a case study, The findings of the study mayn't be simplified for other investment portfolio.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

The main concern of this chapter is to analyze and interpret relevant and available data of OFL and FFL. In another way, we can say that this chapter deals in details in order to meet the objective of this study. Annual reports, other reports provided by OFL and FFL especially for this study and questionnaire are used to find out different types of ratios. The data have been analyzed according to the methodology mentioned in chapter third.

Both Finance limited have been following the directives and committed to maintain quality according to the rules and regulations of NRB and other regulatory body relates to the limited. Both companies have their own policies to run the organization effectively. Both company consider profitability, liquidity, safety and stability, variability etc during the investment as per their own investment policy defines.

4.1   Analysis of Investment Portfolio

For making investment, each and every finance company need fund. Both companies have two types of sources of fund. One is deposit collection and another is shareholders equity. They have managed those collections for different types of funds after it results profit. It is better to make investment below than 80% of the collections and primary capital considering liquidity and risk. Generally government securities and share and debentures of other institutions are referred as financial investment. In other hand financial institution distribute loan and advances for various purpose, we can say those

types of advances as short term investment. Financial investment of Nepal's financial companies is completely dominated by loan and advances.

Table 4. 1

Investment of OFL and FFL (in %)

	OFL						FFL					
FY	Loans & Adv.	Gover. Secu.	Shares & Deb.	Fixed Dep.	Oth.	Total	Loans & Adv.	Gover.S ecu.	Shares & Deb.	Fixed Dep.	Oth.	Total
061/62	98.50	1.23	0.27	0.00	0.00	100.00	95.00	0.22	0.01	4.77	0.00	100.00
062/63	94.21	0.94	0.21	4.64	0.00	100.00	99.86	0.14	0.00	0.00	0.00	100.00
063/64	95.51	0.67	0.15	3.67	0.00	100.00	99.91	0.09	0.00	0.00	0.00	100.00
064/65	97.22	0.49	0.11	2.17	0.00	100.00	99.64	0.06	0.00	0.00	0.29	100.00
065/66	98.80	0.35	0.08	0.77	0.00	100.00	99.73	0.05	0.00	0.00	0.22	100.00
Mean	96.85	0.74	0.16	2.25	0.00	100.00	98.83	0.11	0.002	0.95	0.10	100.00

(Source: Appendix 2)

It shows the historic investment trend of both finance limited. This table depicts the investment portfolio and elucidate that the portion of investment in loan and advance is comparatively higher than other sector. Comparative trend analysis graphical presentation is placed below:

Figure 4.1
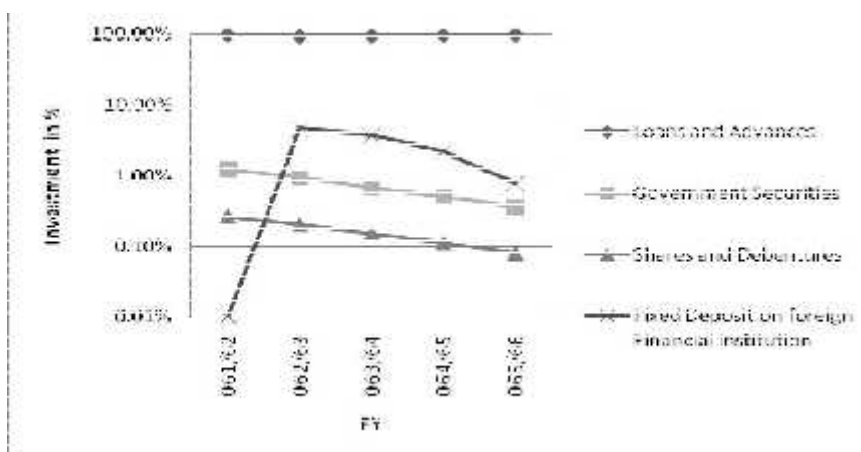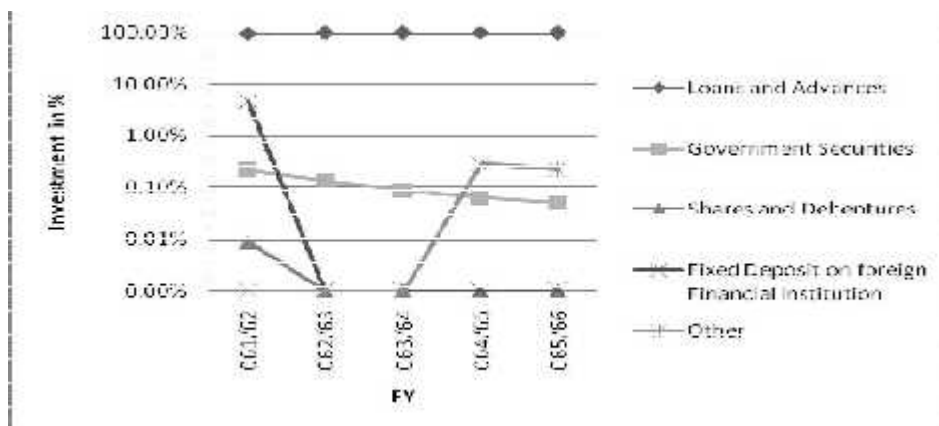
Investment Trend Analysis of OFL

Figure 4.2

Investment Trend Analysis of FFL

OFL has made investment in loan and advances higher than government securities, shares and debentures, fixed deposit with 98.5% in 061/62 in where FFL has invested 95% only on loan and advances. After subsequent years OFL maintained its investment on loan and advance from 94% to 98% in where FFL increased its investment to more than 99% in loan and advances over the last four years. It shows that OFL and FFL both invested their depositor's money to provide loan and advances instead of making other investment.

According to the table 4.1, investment on government securities was made 1.23% and 0.22% by OFL and FFL respectively on 061/62. And again the table shows that the percentage of both finance limited have been decreasing in following years. This is because of subject to survival in initial stage as it is a risk less assets. But, later in order to maximize the profit and sustain in the competitive market, large amount of investment has been made in loans and advances by deducting investment in government securities.

Investment in share and debentures of other institutions have been made 0.21% in 062/63 by OFL . OFL hasn't invested any shares in such investment in first year of this study period. Again it is noticeable that OFL has been deducting it's investment in share and debenture of other financial institution in subsequent

years. But FFL never made noticeable investment percentage in

share and debentures of other institutions. Because simply this is risky than other investment, FFL didn't make investment and OFL gradually declined its investment from the shares and debentures over the last four fiscal years.

Fixed deposit investments in other financial institutions are declined over the subsequent years except 2062/63 by OFL where 4.77% was invested in fixed deposit of other financial institution by FFL in 2061/62 only. After then there was no such investment in fixed deposit made by FFL. OFL started investing on loan and advance by deducting its investment on fixed deposit sector likewise FFL fully diversified its investment on loan and advance.

FFL started to invest in gold since FY 2064/65 which is located in other sector in table 4.1. But no such investment was done by OFL. This type of investment is new for finance company which is also not less risky than other investment.

Figure 4.3

Mean Investment of OFL and FFL (%)
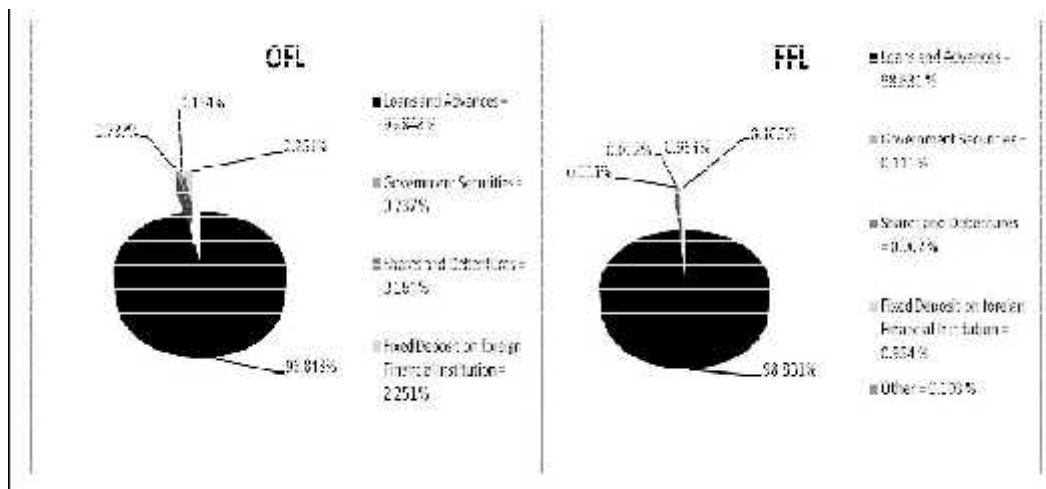
According to the figure, it is shown that both the companies haven't well diversified its investment. The major percentage is invested in the loans and advances. Above 96% is invested in loans and advances in both companies and

the risk associate with the investment is higher than other investment.

Government securities are risk less assets and the both companies have low portion in the security in order to take low risk. For low risk, companies normally make investment in government securities and share and debentures in their initial period. In comparison, loan and advances has occupied almost sent percent of their investment. Therefore for further study it will be focused only on loan and advances instead of all sectors of investment.

4.2   Investment Analysis of Loan and Advances

This section studies on portfolio management of loan and advances. OFL and FFL have focused its investment on hire purchase, housing, term and fixed deposit loan. And again FFL has extended its investment on gold loan and advances as well. As per NRB directives, finance companies shouldn't exceed their investment regarding to the different types of sector wise loan investment. Therefore NRB has declared criteria for investment on sectors of loan and advances on its NRB Act 2058.It is better to analyze sector wise loan and advances considering that criteria.

Table 4.2

Loan and Advances investment of OFL and FFL (in %)

FY	OFL					FFL				
	Hire Purch.	Housing Loan	Term Loan	Fixed Loan	Total	Hire Purch.	Housing Loan	Term Loan	Fixed Loan	Total
061/62	14%	40%	44%	2%	100%	21%	38%	40%	1%	100%
062/63	9%	54%	35%	2%	100%	19%	39%	40%	2%	100%
063/64	9%	51%	39%	1%	100%	22%	37%	39%	2%	100%
064/65	8%	56%	34%	2%	100%	25%	35%	39%	1%	100%
065/66	10%	51%	34%	5%	100%	23%	45%	31%	1%	100%

(Source: Appendix 3)

Above table demonstrates sector wise loan and advance investment proportion for each year of study period. In first year Term loan dominate other

sectors in OFL and housing loan has dominated other sectors in rest of years. In

OFL, housing loan has occupied more than 50% of total loan. In other side, Term loan has dominated other sectors in first four years of FFL and investment on housing loan is highest on 065/066. The details analysis of sector wise loan and advance investments are explained below.

4.2.1 Hire purchase Loan

This loan is related to purchase of vehicles, machinery and instruments. Clients use the amount of loan to purchase such item. Because these types of loans are generally taken for business or for luxury, high interest rate on hire purchase is applied. The interest rate depends upon situation and it lies between 10 to 16% during the study period of both companies. This is second highest investment on loan and advance of both finance companies. Finance company shouldn't increase their investment above 40% as per mentioned in NRB Act, 2058.The hire purchase loan investment of both companies are presented in table and figure below:

Table 4.3

Hire Purchase Loan Investment (in million)

FY	OFL	FFL
061/62	52.70	51.71
062/63	41.09	77.10
063/64	58.54	137.38
064/65	76.06	213.62
065/66	128.03	258.50
Mean	71.28	147.66
S.D	30.53	78.65
C.V	0.43	0.53

(Source: Appendix 3)
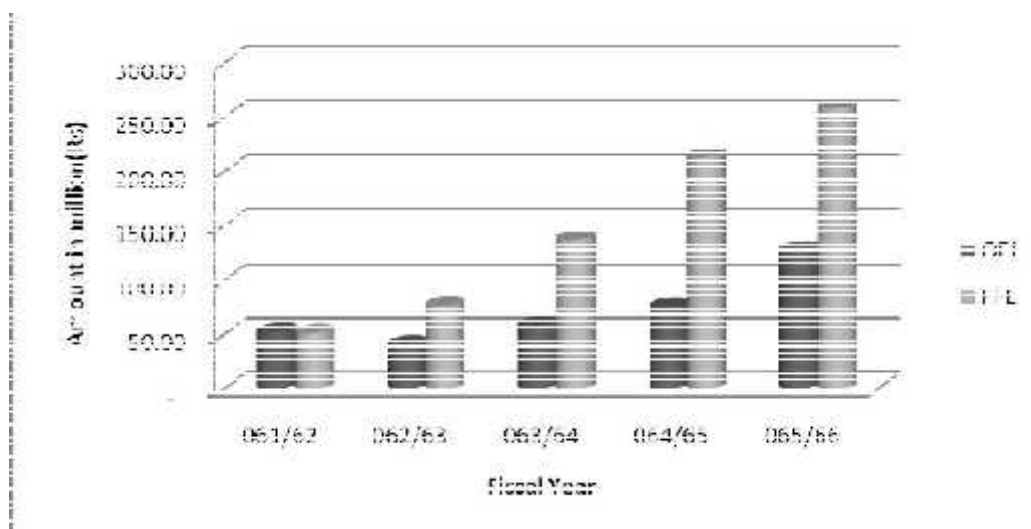
Figure 4.4

Hire Purchase Loan Analysis

Table 4.3 and figure 4.4 demonstrate the investment on hire purchase loan of OFL and FFL from 061/62 to 065/66. It is found that investment of FFL is higher than OFL during the investment period. OFL has invested Rs 52.70 million in 061/62 in where FFL has invested Rs 51.71 million only. During the study period investment of both limited has been increasing and reached at Rs 128.03 million and 285.50 million by OFL and FFL respectively. Investment on hire purchase loan of OFL is dominated by FFL every year except initial year. OFL has invested Rs 41.09 million on 062/63 in where OFL has invested Rs 77.10 million only on hire purchase loan. Same as Rs 58.54 million and Rs 76.06 million was invested by OFL on 063/64 and 064/65. In where, FFL has invested Rs 137.38 million and Rs 213.62 million only on the same period. Mean investment of OFL and FFL on hire purchase loan is Rs 71.28 million and Rs 147.66 million respectively. 9.8% and 22% of total investment has been invested in this sector by OFL and FFL respectively. It denotes that the average investment over the study period of FFL is higher than OFL in where risk associated with the mean is also higher than OFL. C.V. between mean and standard deviation is again higher in OFL which illustrate that variation

between them is lower in OFL than FFL. Overall investment by FFL is found higher in position than OFL.

4.2.2 Housing Loan

Under this loan, Finance company invests money in purchase of land and building construction. House and warehouse specially comes under building construction and purchase and sell of land which is known as real estate business. This is the sector where the investment of both companies engages comparatively higher than other loans. The interest charge in to housing loan from 12% to 18% and varies time to time and other circumstances. According to NRB act 2058, Section 79, the finance company shouldn't exceed this type of investment by 40% of total loan and advances. Within end of Ashad 068, investment must be decreased upto 30% of total loan and advances and again it must be declined upto 25% of total loan and advances within end of Asadh 2069. The housing loan investment of both companies is shown below:

Table 4.4

Housing Loan Investment (Rs in million)

FY	OFL	FFL
061/62	144.39	92.20
062/63	246.55	158.26
063/64	331.73	231.04
064/65	497.19	299.07
065/66	652.95	505.77
Mean	374.56	257.27
S.D	180.96	142.29
C.V	0.48	0.55

(Source: Appendix 3)

Figure 4.5

Housing Loan Analysis
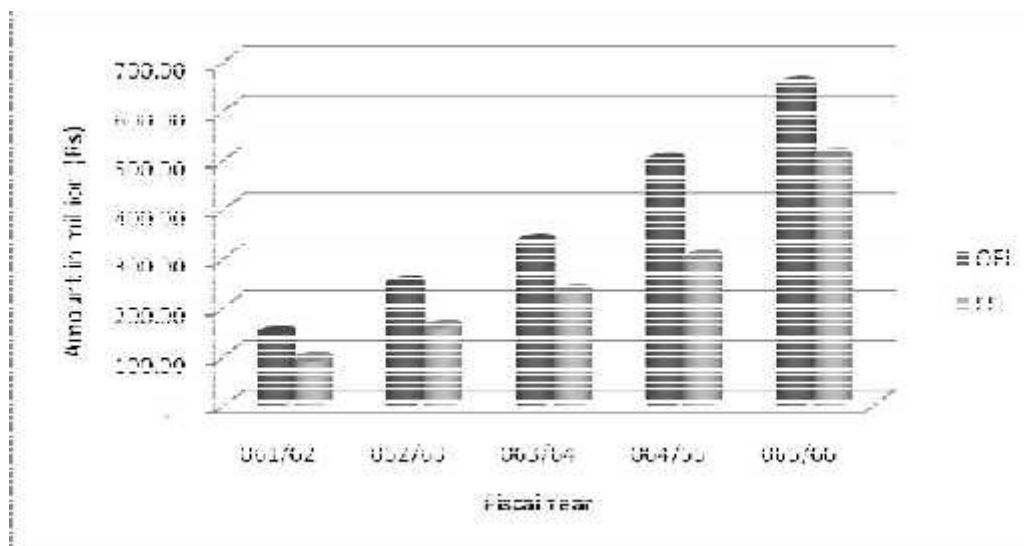
Above table shows that investment on housing loan is adopting increasing trend over the study period by both the companies. Comparatively OFL has been investing in housing loan more than FFL. It is obvious to have high investment in housing loan of OFL than FFL due to the size of deposit collection. Each and every year OFL have made high investment in housing loan, more than six hundred million was invested on FY 065/66 by OFL where as below 500 million only was invested by FFL in this sector. 51% and 39% of total investment has invested in this sector by OFL and FFL respectively. Investment was made 144.39 million to 652.95 million by OFL with 374.56 million mean and c.v between them is 0.48 in where 92.20 million to 505.77 million made by FFL with 257.27 mean and 0.55 c.v. It shows that FFL have been maintaining better position than OFL over the investment on housing loan.

Real estate loan is the part of housing loan provided by financial intuition. More than 50% investment is occupied by real estate within housing loan. One of the main functions of financial institutions is to deposit collection of scattered

money within the country and to invest money

collectively. It is direct liability of the financial institution to invest on favor of nation development, if they collect all the money from country people. Otherwise, it is impossible to develop the country. In another side the main cash outflows of banks end to the real estate loan. IF so, is it better to invest in real estate loan by financial institution? Discussing all about the point, we found that lots of causes to invest in real estate sector by financial institutions.

Each and every family from villages want to immigrate into urban sector. It deducts the no. of people involve in agricultural works and also it has been occupying all the productive lands of urban sectors. In one hand, financial institutions have low investment opportunities and another hand each and every people need money to settle them in urban area. Then demand of money for real estate and housing loan only can fulfill the gap between deposits and loan investment. Even financial institutions are serious about the nation development; they have low short term investment opportunities. And again financial institutions are normally formed to earn profit. Therefore they must invest in short term profit making investment in order to run the organization. It may be a big challenge for financial institutions to go for investment in real estate loan and make short term profit.

In past years real state was becoming hot issues for investment personally or officially. Each and every land was becoming worthy rapidly. In past, it was increased unnaturally and became national issues. Each and every newspaper took the real estate news in their priority list. There are two main reasons for becoming national issue. One is fictitious rate of land on which basis banks are liable to issue loan. And another is liquidity crisis. Due to remittance most of family's made demand of land and house. It made real estate demand high and peoples got opportunity to invest and make quick income from the business. Business man, investment companies, individuals all involved in real estate transaction and tried to keep the transaction out from the financial channel. Because NRB had no strong directive over such investment on real estate, every

financial institution got opportunity to use

their deposit on real estate loan investment. Financial institutions also realized high return in real estate as demand for the same was also high. Therefore they made high investment on real estate loan and became one of the causes to liquidity crisis.

Real estate business was rapidly increasing when remittance increased same where earning power of peoples increased. It increased price of land and each and every people got interest to involve in real estate business for quick profit. It had automatically increased housing loan of every financial institution.

Figure 4.6

Investment on Real Estate Loan Development Series
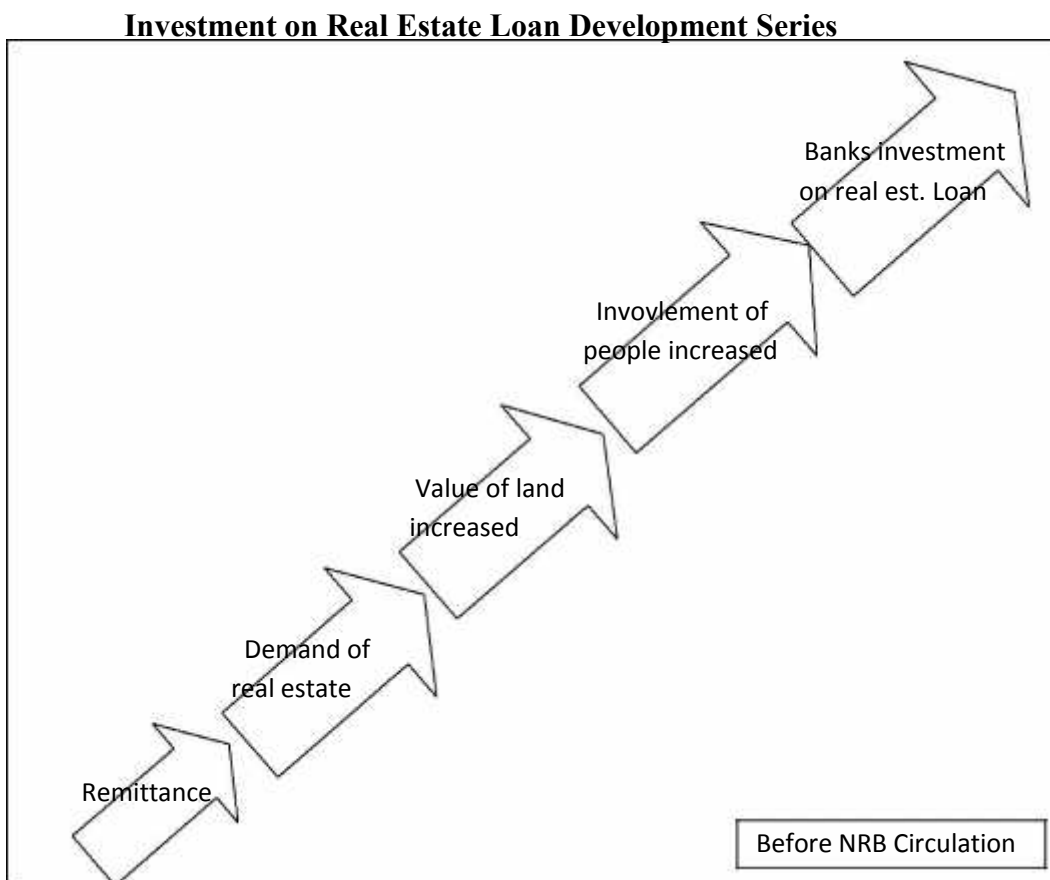
According to the figure, we can easily predict how the rate of land increased unnaturally. First factor was remittance. Remittance to Nepal in last

some years was recorded very high. Remittance brought change in living

standard and it produce interest in most of people to leave villages and settle in urban areas. And demand of real estate was indicated high. It is obvious that where demand is high, supply must be high in order to meet the demand. From lower level to higher level standard people were started to involve in the business. Finally for the business, people should come to the door of financial market. Each and every financial institution were compelled to issue loan for housing business. As they don't have strict policy toward housing loan, they provided loan so that they can invest in this sector. Because the price of lands already touched unnatural rate, financial institutions were compelled to value the land on the basis of unnatural rate. It was very dangerous situation for financial institutions which was not measured and even ignored. All of this happened and finally the rate and transaction of real estate increased, each individual had to give justification to deposit and withdraw more than rupees ten lakh from banks, thus people tried to keep the transaction out from banks. It created another huge problem of liquidity across the country.

After all these problems realized by NRB, On 02 Poush 2066, NRB had announced a circulation with three major directions on the loan and advances criteria which were;

a) Total loan and Advances shouldn't be more than 80% of Local Deposit and Primary Capital

b) Loan amount on real estate shouldn't cross the limit of 60% of Fair Market Value of the collateral asset.

c) Real estate loan amount shouldn't be more than 25% of total loan and advances amount. And both sum of real estate and housing loan shouldn't be more than 40% of total loan and advances.

We have already discussed why NRB was compelled to announce the circulation and now we are going to focus what is the current position of the financial institution over the directive and can they achieve the criteria.

Total loan and advances shouldn't be more than 80% of local deposit and primary capital. If any financial institution have already issued loan and advance more than this criteria before current circulation should adjust the loan and advances down to 95% within end of Asadh 2067, 85% within end of Asadh 2068, 80% within end of Push 2068.

To provide loan on real estate business, financial institution follows their policy and practice. Generally they focus the background of borrower; may be educational status, physical and mental condition, collateral and earning capacity etc. The minimum criteria they consider is collateral and cash flow of the customer. And again after providing loan, financial institution make follow up on the utilization of loan that the customer has taken. If it is found that customer hasn't been properly using the loan, financial institution promptly take action over the loan. The practice of rate to provide real estate loan is more than 60% of collateral assets. The average of fare market value and distress value of land is generally calculated by financial institution for the final rate of collateral assets and the loan provided on the basis of final rate. And the loan below rupees ten lakhs can evaluate by loan officer and more than the amount must evaluate by external evaluator. If the loan seems good, financial institution provide loan up to 90%. But it isn't difficult to provide the loan below 60% in order to meet the NRB directive.

Table 4.5

Housing Loan portion over Total Loan (in %)

FY	OFL	FFL
061/62	40 %	38 %
062/63	54 %	39 %
063/64	51 %	37 %
064/65	56 %	35 %
065/66	51 %	45 %

(Source: Appendix 3)

Figure 4.7

Housing Loan Analysis over Total Loan
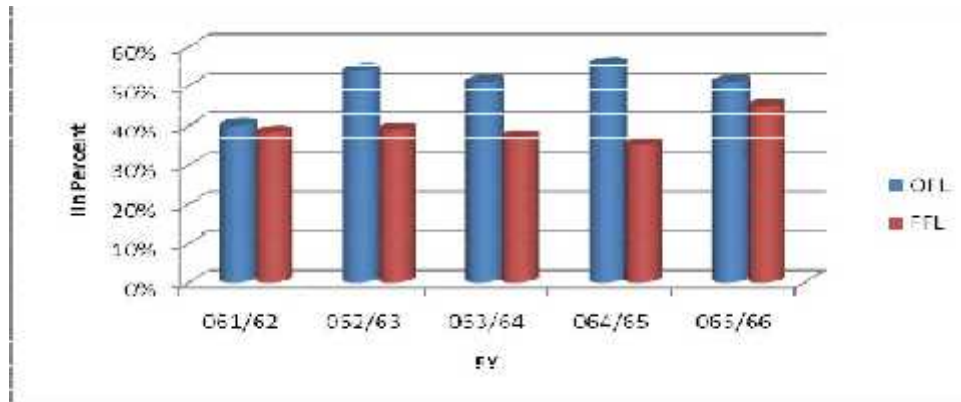
According to the figure, we can easily find that the both finance companies have housing loan investment as a major part of loan and advances. Total housing loan covered 40% and 38% in 061/62 by OFL and FFL. Later 54% and 39% in 062/063, 51% and 37% in 063/064, 56% and 35% in 064/065, 51% and 45% housing loan in 065/066 covered by OFL and FFL respectively. FFL has crossed the 40% limit only once in past study period in where OFL could not reduce housing loan investment below than 50%. It shows that OFL has invested more than 50% in housing loan which may be harmful for OFL in coming years. Considering the directive of NRB, we can find that OFL has been maintaining higher level in past years than the NRB criteria and little more difficult to manage deduction housing loan in coming years.

As per the NRB circulation, housing loan and advances should be deducted to 30% of total loan and advance within end of 2068 Asadh. Same as 25% within end of 2069 Asadh. It means both companies must come under 25% bracket for housing loan in where no more than 10% can be invested into real estate. It will be very difficult for both companies to maintain the bracket by deducting 50% of housing loan. It isn't simple to deduct loan by 50% of current

issues. It is challenge for the both companies.

Figure 4.8

Effect of NRB's Circulation over Loan Borrower
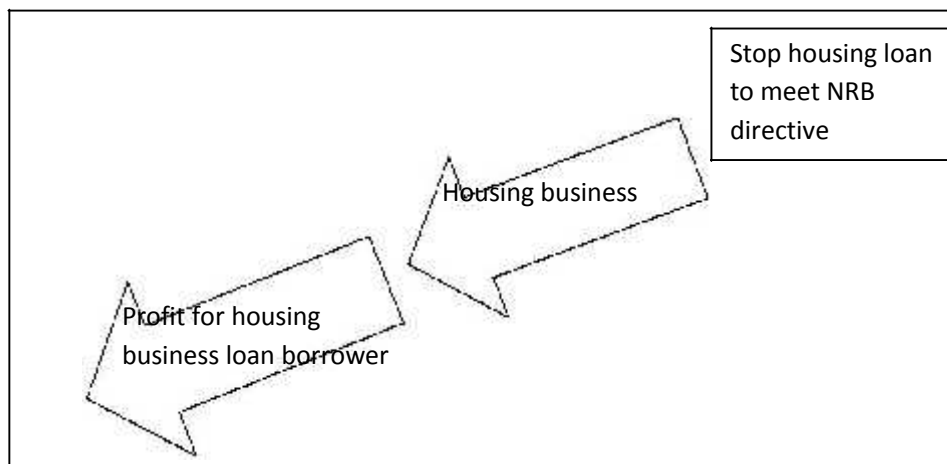
After NRB's circulation, financial institutions have to face two challenges. One is to deduct the portion of housing loan and another is to deduct the loan safely. Because NRB circulation indirectly affect the business of housing loan, quick profit income objective of borrower has been becoming false. It results the loss for the borrowers which may be harmful for financial institutions.

Figure 4.9

Effect of NRB Circulation over Financial Institutions
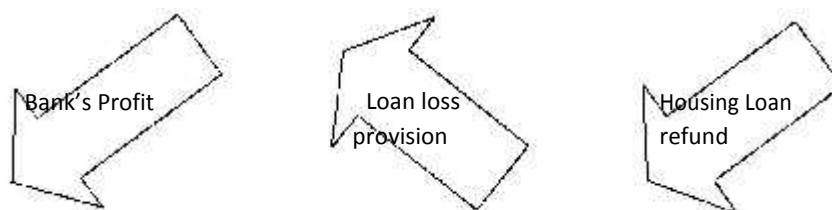
Deduction of loan refunding will cause bad loan increase. Each and every financial institution is liable to make provision for bad loan according to their portion over the loan. This portion of bad loan provision will increase after fail to take refund the loan by financial institution. It will adversely affect financial institution's profit.

Finally some merits and demerits of the circulation of NRB can be generalized.

Merits:

1. The circulation will reduce the risk associated with housing loan

2. It saves financial institutions from anticipated accident.

3. It tries to maintain liquidity.

4. It shows that real estate loan isn't the healthy investment from the point of view of nation development

5. Indirectly it tries to let finance institutions focus their investment in Industrial sector instead of real estate loans

Demerits:

1. Because it was too delay to circulate the direction, financial institutions had already made their high investment on housing loan.

2. It reduce financial institution's investment option.

3. It makes high probability to increase bad loan provision.

4. It will reduce profit if all conditions remain the same.

5. Funding source for housing developers will decline.

4.2.3 Term Loan

Term loan denotes the loan which is taken for education, agriculture, tourism, health etc. Small business and industry occupy the major portion of this loan. Therefore it can be assumed that the investment made in term loan is comparatively productive loan than other loan sectors. 13% to 17% interest rate was applied for those types of loan according to the nature of need, no. of years

and other aspects during the study period. According to NRB Act 2058, Section 79, company should not make more than 75% investment in term loan. Term loan investment of both companies is presented as below:

Table 4.6

Term Loan Investment (Rs in million)

FY	OFL	FFL
061/62	160.18	95.21
062/63	159.80	162.32
063/64	253.68	243.53
064/65	306.82	333.25
065/66	435.30	348.42
Mean	263.16	236.55
S.D	102.87	97.37
C.V	0.39	0.41

(Source: Appendix 3)

Figure 4.10

Term Loan Analysis
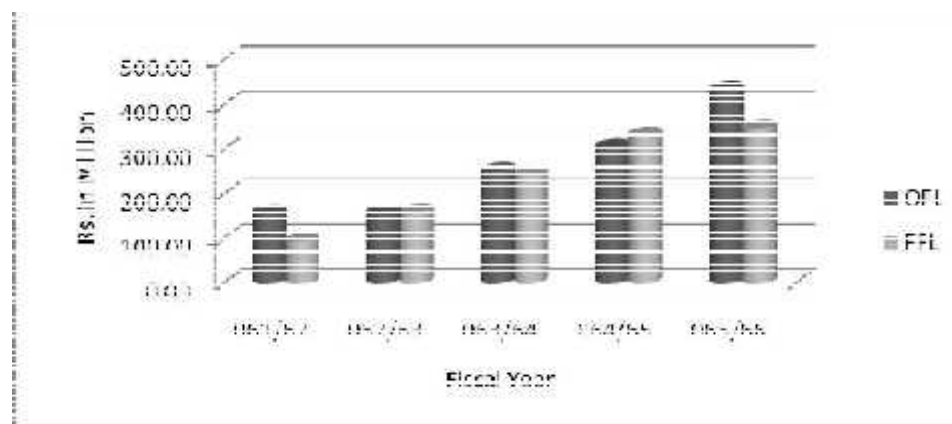
Table and figure 4.5 explain the term loan of OFL and FFL. OFL has invested Rs 160.18 million in FY 061/62 where as FFL has invested Rs 95.21 million only in 061/62 for the same. In FY 062/63 investment on term loan of OFL was dominated by FFL. And again OFL has invested Rs 253.68 million on

063/64 where as FFL has invested Rs 243.53 million and FFL was

dominated by OFL. Remaining two fiscal years of study period, FFL has made more investment than OFL. 36% of total investment has invested in this sector by each of the companies. Both companies have been increasing their investment on term loan years to years. OFL has higher mean than FFL. It shows that the investment of OFL over the term loan is higher than FFL. But OFL has low deviation and coefficient of variation. It shows that OFL has been maintaining good position for the term loan investment.

4.2.4 Fixed Loan

Fixed loan is such type of loan which is provided on the basis of fixed deposit amount of the customer. Initially customer deposit money in fixed deposit account of finance company but later when the customer needs money, he/she claims loan on the deposited amount that he/she has been maintaining within the company. The finance company provides loan against the deposit by charging interest of generally 2% - 5% more than the deposited interest. The table and figure of the fixed loan is given below:

Table 4.7

Fixed Loan Investment (Rs in million)

FY	OFL	FFL
061/62	6.67	1.86
062/63	9.13	8.12
063/64	6.50	12.49
064/65	15.77	8.54
065/66	64.01	11.24
Mean	20.42	8.45
S.D	22.06	3.68
C.V	1.08	0.44

(Source: Appendix 3)

Figure 4.11

Fixed Loan Analysis
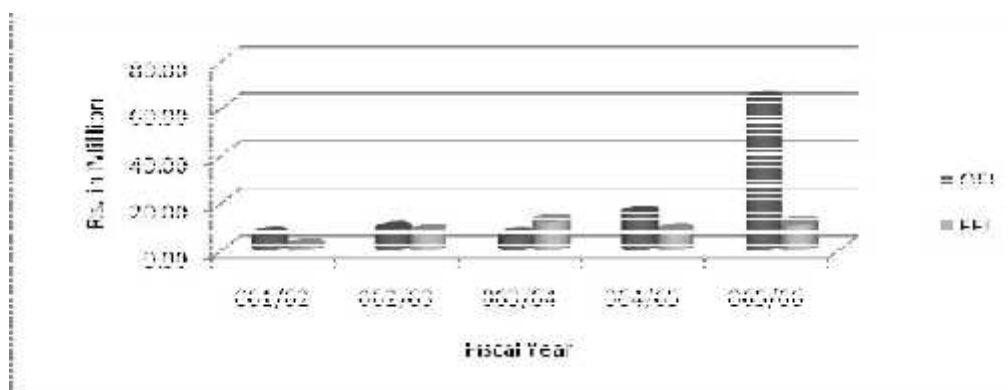
Table 4.6 and Figure 4.11 depict the fixed loan investment of OFL and FFL. Except FY 063/64, all the fiscal years during the study period, OFL has dominated the investment of FFL. Rs 6.67 million and Rs 1.86 million was invested on 061/62 by OFL and FFL respectively. In first FY of the study period, we can see that there is a large difference between investment of OFL and FFL. But in 062/63, the investment gap between OFL and FFL has come closer than last year and end at Rs 9.13 million and Rs 8.12 million respectively. FFL has dominated OFL in FY 063/64 by investing Rs 12.49 million where OFL has limited only in Rs 6.50 million. Again OFL has higher investment on fixed loan in FY 064/65. Finally OFL has made huge investment in 065/66 than FFL. This year is found quite different than past years of OFL. Rs 64.01 million were invested in final study period by OFL. This illustrates that OFL has diverted its investment on fixed loan from term loan in FY 065/66. 2.8% and 1.3% of total investment was invested in this sector by OFL and FFL respectively. OFL has higher mean, s.d., and c.v., than FFL. It explains OFL is not maintaining consistency over the fixed loan than FFL.

4.3   Profitability Analysis

Profit is the main objective of every financial institution. They invest to earn profit, provide service in order to satisfy customer and to generate more

profit. They take deposits and spread the loan to various persons to generate

profit. Without profit, financial institutions can not operate their regular and irregular duties. Financial institutions provide dividend to staffs and take retained earnings from the profit they earned in each fiscal years. Hence, profitability ratio can be regarded as a control measure for the earning power and operating efficiency of a firm.

Better profit is hunted by every financial institution. And we can measure their profitability position from different aspects. Generally profitability is of two types - in relation to sales and in relation to investment. Profitability related to sales defines the profit generated through sales which is not applicable for financial institutions and profitability related to investment explains the profit produced with investment activities. The profitability ratios are used to measure operating efficiency of an organization. That may be Return on Total Assets, Return on Equity, Return on Total Investment, Interest spread ratio etc which are explained below.

4.3.1 Return on Total Assets

This is the ratio which indicates the position of profit over the assets. Financial institutions make investment over different types of assets in order to run daily operations. These types of assets are long run assets. It helps the organization to survive years to years. All the assets are the wealth of the company which means wealth of the shareholders. ROA helps to analyze strength of the company. Higher ratio indicates total assets are effectively used. Return on Total Assets of OFL and FFL are shown on the table below:

Table 4.8

Return on Total Assets (in %)

FY	OFL Ratio	FFL Ratio
061/62	2.10%	2.48%
062/63	1.86%	2.09%
063/64	1.80%	2.49%

064/65	1.62%	2.51%
065/66	1.80%	2.07%
Mean	1.83%	2.33%
S.D.	0.15%	0.20%
C.V.	8.40%	8.66%

(Source: Appendix 5)

The highest ROA of OFL is 2.10 % in 061/62 and lowest ratio is 1.62% in 064/65. And the highest ROA of FFL is 2.51 % in 064/65 and lowest ratio is 2.07% in 065/66. Mean ratio is 1.83% and 2.33% of OFL and FFL respectively. C.V. between return and total assets of OFL is 8.40% and FFL is 8.66%. Both finance companies have been maintaining satisfactory return position over the assets separately but OFL is found comparatively weak than FFL on the basis of assets utilization. Also the C.V. between return and assets of both companies is positive. Figure can more define about the trend of ROA. So the figure from the same data is presented below:

Figure 4.12

Return on Total Assets Analysis
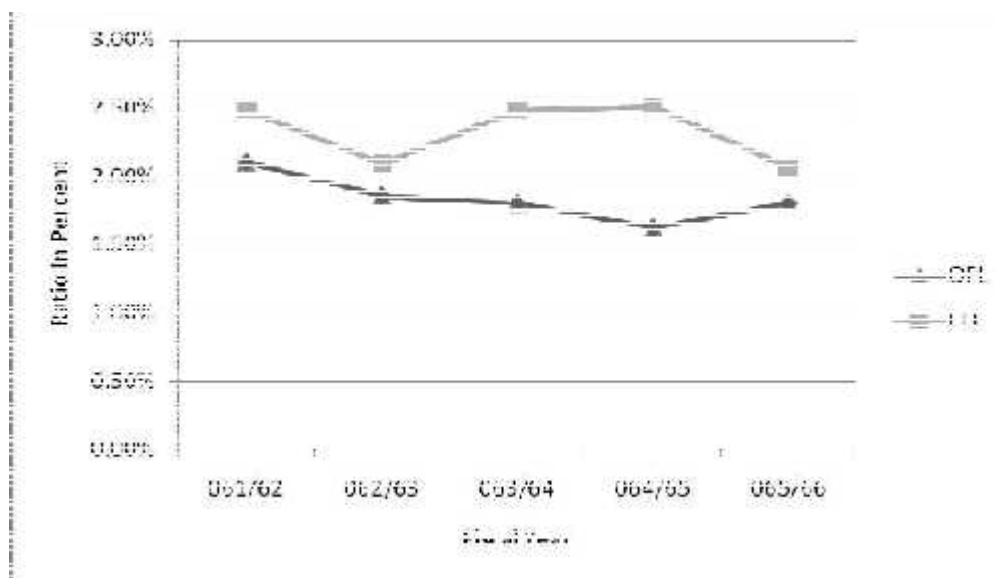
Figure 4.12 shows that return on total assets ratio has been decreasing

during the study period of OFL and fluctuating situation of FFL. OFL has been

generating more profit than FFL but the ratio of return and assets is found lower than FFL. It illustrates that FFL has been using the assets more effectively than OFL. We can conclude that both the finance limited has been maintaining consistent ratio of ROA but comparatively FFL is found more potential on using assets than OFL.

4.3.2 Return on Equity

Generally shareholder's wealth is denoted as equity. One of the main sources of fund is shareholder's equity. The term'smeaning depends very much on the context. In finance, in general, we can say equity as ownership in any asset, after all debts associated with that asset are paid off. For an example, a car or house with no outstanding debt is considered as the owner's equity because we can enthusiastically sell the item for cash. Stocks are equity because they represent ownership in a company. It helps to analyze return on shareholder's investment. This ratio states how well the firm has used the resources of the owners to earn the profit. Therefore, it is better to be high return on equity for shareholders. ROE of OFL and FFL is listed below:

Table 4.9

Return on Total Equity (in %)

FY	OFL	FFL
061/62	45.40%	34.58%
062/63	21.77%	19.97%
063/64	19.56%	34.07%
064/65	26.69%	35.75%
065/66	24.91%	31.88%
Mean	27.66%	31.25%
S.D.	9.20%	5.78%
C.V.	33.27%	18.49%

(Source: Appendix 6)

The table 4.9 shows that 061/62 has the highest ROE in OFL and 064/65

has highest ROE in FFL. It is found that each company has high ROE in first

study period and later it has been decreasing by year to years. FFL has been maintaining ROE more than 30% but OFL has been loosing the percentage of ROE year to year. The cause behind this is OFL has increased its shareholder's equity from 20 million to more than 104 million during the study period where as FFL has increased its equity from 20 million to 91 million only in the same period. And the Net profit after tax of FFL is higher than OFL from FY 063/64. Mean is found satisfactory for both the finance limited. Because of higher standard deviation and lower mean, OFL is found less consistent on ROE than FFL. The table is presented below in figure:

Figure 4.13

Return on Total Equity

Analysis
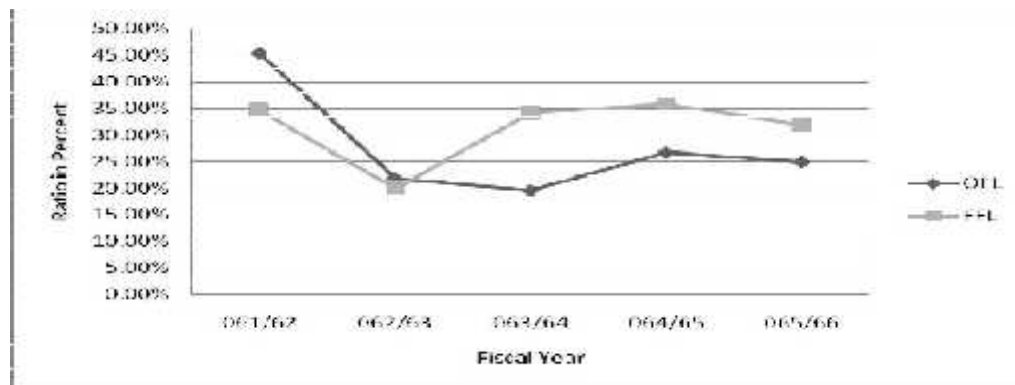
The above figure explains the trend of ROE in OFL and FFL during the study period. OFL has highest return in first study period in where FFL has less return by 10%. In FY 062/63 both limited has same return and after then FFL has made growth over the return in where return of OFL has declined. Similarly return of OFL is increased in 064/65 from 20% to 27% where as FFL fail to increase their ROE as OFL. ROE of both the companies have been declining at last fiscal year of the study period. In conclusion we can say that the trend of FFL's ROE is more effective than OFL.

4.3.3 Return on Investment

ROI refers to the ratio which indicates the return over the total investment of the company. In context of financial institutions in Nepal, only few portion of funds that has been using in investment, most portion of available fund has been using in disbursement of loan and advances. Therefore, we hereby, took loan & advances and other investment all for analyzing return on investment. ROI measures management effectiveness over the available resources in generating profit. Higher profit is the signal of better management. ROI of OFL and FFL being tabulated as below:

Table 4.10

Return on Total Investment (in %)

FY	OFL	FFL
061/62	2.46%	2.73%
062/63	2.25%	2.46%
063/64	2.01%	2.73%
064/65	2.03%	2.92%
065/66	2.02%	2.57%
Mean	2.15%	2.68%
S,D.	0.18%	0.16%
C.V.	8.20%	5.84%

(Source: Appendix 7)

According to the table listed above, OFL and FFL have almost the same ROI. They have been maintaining their investment very sincerely. OFL has made 2.46% and FFL has made 2.73% ROE on first study period. We can see that OFL is not successful in getting return again during the study period where as it is shown that FFL has been trying to maintain the same return during the study period. Finally OFL has reached to 2.02% and FFL has maintained 2.57% . Mean of OFL is 2.15% and FFL is 2.68%. OFL has higher S.D. than FFL by 0.02%. Considering C.V., OFL has less effective ROE than FFL. The figure of

the table is presented below:

Figure 4.14

Return on Total Investment Analysis
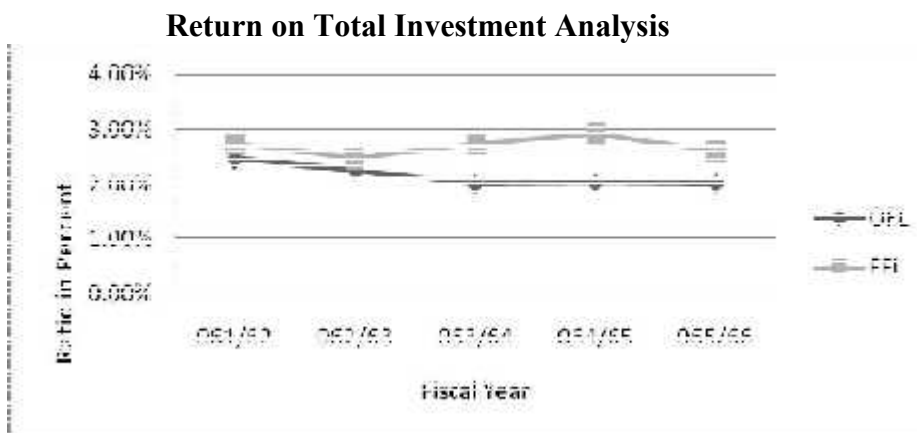
The figure presented above reveals that ROE curve of OFL has been decreasing over the study period and ROE curve of FFL has been variable over the period. From 2.46% ROE of OFL is decreased to 2.02% and from 2.73% ROE of FFL has started decreasing to 2.46%, secondly increased to 2.92% and finally it is decreased to 2.57%. Although ROE of FFL is variable, mean is high and s.d. is low, the investment management of FFL is found better than OFL.

4.3.4 Weighted Average Interest Spread Ratio

Interest is the return of any lending. Interest spread is the difference between the interest payment and interest earn. The average of interest on all types of loans and interest on all types of borrowings can be called weighted average interest spread ratio. Especially the term is used in financial institutions because the major focuses of the firms is concentrated on the interest earned and the payment of the borrowings. Higher interest spread ratio defines more possibility of profit. Data table is listed below for interest spread ratio:

Table 4.11

Weighted Average Interest Spread Ratio

FY	OFL	FFL

| 061/62 | 5.86% | 6.19% |

062/63	4.72%	5.72%
063/64	4.44%	5.46%
064/65	3.74%	4.90%
065/66	4.05%	4.79%
Mean	4.56%	5.41%
S,D.	0.73%	0.52%
C.V.	16.00%	9.61%

(Source: Appendix 8)

The table 4.11 shows that interest spread ratio of both the limited is in decreasing trend. FFL has been maintaining comparatively high ratio from the starting to end of the study period. It illustrates that the return of FFL is higher than OFL. The ratio of OFL and FFL is 5.86% and 6.19% in 061/62 respectively which is the highest ratio over the study period for both limited. The ratio of OFL and FFL is decreased down to 4.05% and 4.79% respectively in 065/66 which is the lowest rate for FFL. The lowest ratio of OFL is 3.74% in 064/65. In common, OFL has maintained 4.56% and FFL has maintained 5.41% over the study period. C.V. between OFL and FFL is differed by more than 6%. Consequently we can say that FFL is found more efficient than OFL.

Figure 4.15

Weighted Average Interest Spread Ratio Analysis
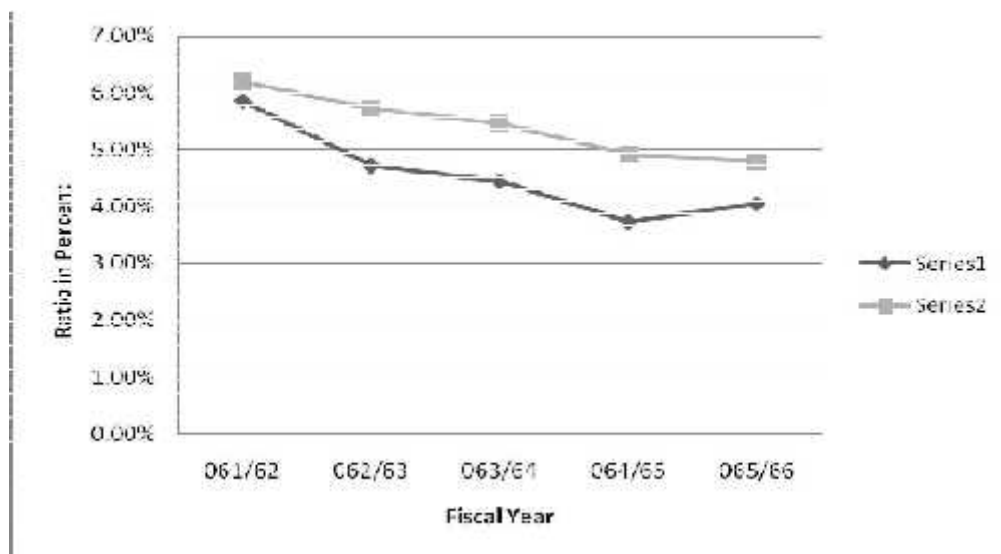
Figure 4.15 presents that the interest spread ratio of both companies has been running almost in same trend but the percentage between them is highly differed with each other. Interest spread ratio of first study period of both limited is in almost same position but after then the ratio of OFL is lying under than 5% where as the ratio of FFL is always seen more than 4.5%.

4.4 Analysis of Risk and Return of OFL and FFL

Risk and Return of OFL and FFL have analyzed in two categories. One is sector wise risk and return of loan and advances and another is portfolio risk and return. For portfolio risk and return we have analyzed individual return with weight, covariance, correlation and the portfolio risk and return one after one.

4.4.1 Sector wise risk and return of Loan and Advances

As we have mentioned in limitation, this study has focused on loan and advances as the loan and advances is the major investment sector of financial institutions. Because return of loan and advances is interest income, the researcher has not included profit as return in this study. All the returns represent the interest of concerned loan and advances.

Table 4.12

Sector wise Risk and Return of Loan and Advances

Loan and Advances	OFL			FFL		
	Average risk (σ_{OFL})	Weight(w)	Expected Return ($\overline{R_{OFL}}$)	Average risk (σ_{FFL})	Weight(w)	Expected Return ($\overline{R_{FFL}}$)
Hire Purchase	2.36	0.098	11.78	0.72	0.227	10.03
Housing Loan	1.11	0.514	10.19	1.11	0.396	10.39
Term Loan	1.13	0.361	10.54	0.67	0.363	10.07
Fixed Loan	3.86	0.028	8.87	3.34	0.013	8.25

(Source: Appendix 10 and 11)

The above data portrays average risk, return and weight over the five years of study period. This data is suitable to analyze the risk and return of each loans and advances separately on the basis of their investment weight.

OFL has made 9.8% investment of total loan in hire purchase loan and generated 11.78% return with 2.36% of risk. For the same category, FFL has made 22.7% investment of total loan in hire purchase and generated 10.03% return with 0.72% of risk. Not only, we can see that the profit generated by OFL is higher than FFL in hire purchase but also the percentage invested by OFL in the sector is also significantly lower than FFL. But the risk shows that OFL is not maintaining consistency over the return. Because of the more fluctuation in return of different five years, the risk of OFL has gone up to 2.36% which is higher by 1.13% than FFL.

Housing loan is the largest sector in where Finance companies have invested their funds. Here, OFL has made 51.4% investment of total loan in housing loan and generated 10.19% return with 1.11% of risk. For the same category, FFL has made 39.6% investment of total loan in housing and generated 10.39% return with 1.11% of risk. We can see that the profit generated by FFL is higher than OFL in housing loan but the percentage invested by FFL in the sector is also significantly lower than OFL. And the most important part is that the risk associated with the return of both companies is equal which verifies that FFL has been maintaining better position on housing loan than OFL during the study period.

The weight of both finance limited in term loan are almost equal, OFL has invested 36.1% and FFL has made 36.3%. And again the return of both companies is equal to some extent, OFL prevailed 10.54% and FFL prevailed 10.07%. If both the situation is same, we have to ensure whether they have generated their return with again same risk or not? Exactly not, OFL has played more riskily than FFL. OFL has generated the return by bearing 1.13% of risk where as FFL has generated the return with 0.67% of risk only. In this case, we can easily determine that FFL has been investing in term loan with better

performance than OFL.

In the forth sector of loan and advance, that is Fixed Loan, OFL has made 2.8% investment of total loan and advances where FFL has made 1.3% only. Comparatively OFL has made higher investment than FFL and has gained higher return also. OFL has generated 8.87% of return and FFL has generated only 8.25%. FFL has generated the profit with 3.34% of risk where as OFL has played 3.86% risk only.

4.4.2 Portfolio Return

The main objective of portfolio is to reduce unsystematic risk, through which the investor can get optimum return in certain degree of risk by constructing efficient portfolio. In making portfolio investment, the total available fund is divided into proportion for different sectors. The total weighted of a portfolio is equal to 100%.

Table 4.13

Portfolio Return of Loan and Advances

Loan and Advances	OFL			FFL		
	Expected Return ($\overline{R}_{OFL}$)	Weight (w)	Portfolio return ($\overline{R}_{pZOFL}$)	Expected Return ($\overline{R}_{FFL}$)	Weight (w)	Portfolio return $\overline{R}_{p\ ZOFL}$
Hire Purchase	11.78	0.098	1.151	10.03	0.227	2.279
Housing Loan	10.19	0.514	5.234	10.39	0.396	4.114
Term Loan	10.54	0.361	3.804	10.07	0.363	3.664
Fixed Loan	8.87	0.028	0.248	8.25	0.013	0.107
Portfolio return			**10.44**	**Portfolio return**		**10.16**

(Source: Appendix 9)

The above table illustrates the portfolio return of OFL and FFL. OFL has generated 11.78% return in hire purchase loan and advances with 9.8% of weight. Then the return of hire purchase loan in five years portfolio comes to 1.151%. Same as, the sector wise portfolio return of OFL is 5.234% in housing

loan, 3.804% in term loan and 0.248% in fixed loan. FFL has been maintaining

consistency in expected return in every sector. Due to different weight of investment, the expected return has come down to different figures. In hire purchase loan, FFL has earned 2.279% return, 4.114% in housing loan, 3.664% in term loan and 0.107% in Fixed loan.

Even the expected return in hire purchase loan of OFL is higher than FFL, the portfolio return of the sector is lower than FFL due to the low proportion allocated to the hire purchase by OFL. Same condition is applied to FFL when we have a look on housing loan return. Even the FFL has higher expected return in housing loan; the company has low portfolio return for the sector due to the same reason. Almost the same expected return and same weight, both companies have proximity in portfolio return amount of term loan. OFL has made high investment in fixed loan and has received high expected return also. Therefore the sector wise portfolio for fixed loan is higher than FFL.

The loan and advance investment portfolio return of OFL has finally reached to 10.44% where FFL has reached to 10.16%. From this, we can simply conclude that OFL has earned higher interest on the basis of their investment than FFL. But it will not be fare enough to make our final decision on the basis of portfolio return only. Therefore we have to work out more on performance position.

4.4.3 Analysis of Covariance and Correlation

As covariance is a measure of the degree where two variables move together over time period and correlation is computed through covariance which indicates relation between two sectors that is involved to create investment portfolio. The table listed below helps to show the relation between two sectors of investment;

Table 4.14

Covariance and Correlation of OFL and FFL

Loan and Advances	OFL		FFL	
	Covariance (Cov)	Correlation (...)	Covariance (Cov)	Correlation (...)
Hire Purchase & Housing Loan	0.05	0.02	0.10	0.12
Hire Purchase & Term Loan	2.18	0.81	-0.04	-0.07
Hire Purchase & Fixed Loan	1.12	0.12	0.37	0.16
Housing Loan & Term Loan	-0.54	-0.43	-0.69	-0.93
Housing Loan & Fixed Loan	-0.06	-0.01	-1.93	-0.52
Term Loan & Fixed Loan	-1.06	-0.24	1.71	0.77

(Source: Appendix 12)

If the covariance between the return is positive, it indicates the trend of positive move between the sectors of investment. Above table depicts that Hire purchase and Housing loan, Hire Purchase and Term loan, Hire loan and Fixed loan of OFL has positive covariance and indicate positive trend for positive move and rest of sectors have negative covariance which indicates trend for negative move together at the same time. In FFL, Hire Purchase & Housing Loan, Hire Purchase & Fixed Loan and Term Loan & Fixed Loan tend to move in the same direction at the same time as they have positive covariance and rest of sectors has negative covariance which indicates the trend of opposite move at the same time.

Correlation helps to authenticate the relationship between two sectors of loan and advances especially from the risk point of view. Portfolio having correlation between 0.40 to 0.75 reduces the risk, +1 correlation defines

portfolio as single investment because risk cannot be reduced in such portfolio,

portfolio having -1 correlation means risk can be eliminated fully, 0 correlation shows no relation between investment sectors and rest of other correlation values depicts that risk can be reduced partially. Hire purchase and housing loan, Hire Purchase and Term loan, Hire purchase and Fixed loan in OFL have positive correlation and rest of other sectors correlation are negative. Term Loan & Fixed Loan of FFL have positive correlation around 0.75 but rest sectors correlation are negative. The combinations of investment having negative correlations are generally accepted in order to minimize risk factor of the investment.

4.4.4 Portfolio Risk and Return

Loan and advances are divided in four sectors for portfolio calculation of loan and advances. Portfolio risk and return of loan and advances of both finance limited over five years is illustrated by assuming interest on sector wise investment of loan and advances as return and the proportion of investment as weight. On the basis of those figures we have calculated portfolio risk. Table and graphical presentation for Portfolio risk and return of both finance companies are placed below:

Table 4.15

Loan and Advances Portfolio Risk and Return

S.N	Finance Limited	Loan & Advances Portfolio Return (R_p)	Loan & Advances Portfolio Risk ($\dagger_p$)
1	OFL	10.44	0.70
2	FFL	10.16	0.30

(Source: Appendix 10 and 11)

Figure 4.16

Portfolio Risk and Return of Loan and Advance (in %)
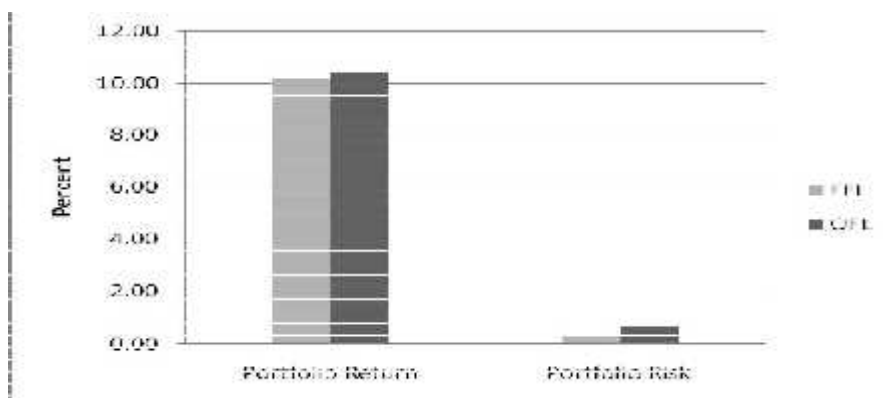
The table and the graph located just above presents the portfolio return on loan and advances of OFL and FFL. OFL has generated 10.44% return from the portfolio and 10.16% return is generated by FFL as explained above. The portfolio returns are not that far from risk. OFL has 0.70% portfolio risk associated with the return where as FFL has just 0.30% portfolio risks associated with return. From this analysis, we can say that FFL has been maintaining a good position than OFL because FFL has generated almost the same profit with lower risk. For further authentication of better portfolio performance, here we have used Sharpe portfolio measurement tools.

4.5   Portfolio Performance Analysis

For portfolio performance on the basis of Sharpe's concept, market performance is the standard performance on the basis of which the performance of other sectors portfolio can be analyzed. If the portfolio which we want to observe has low performance percentage can be declared as low performed portfolio and vice versa. Therefore the market performance should not be overseen while measuring performance of portfolio by using Sharpe measurement of portfolio performance.

4.5.1 Analysis of Market Position

Only one stock market exists in Nepal named Nepal Stock Exchange Limited (NEPSE). Overall market movement is represented by the market index i.e. NEPSE index. All the trading of stock is traded in NEPSE. In this section, performance of finance companies is compared with market performance. Therefore market risk and return should not be overseen. Market return as per NEPSE index has been presented below:

Table 4.16

Calculation of Market Returns, Variance of market

Fiscal Year	NEPSE Index	$R_m \ X \dfrac{NI_t \ Z NI_{t \ Zl}}{NI_{t \ Zl}}$	$R_m \ Z \overline{R}_m$	$(R_m \ Z \overline{R}_m)^2$
060/61	222.04	-	-	-
061/62	286.67	0.291	-0.028	0.0008
062/63	386.83	0.349	0.030	0.0009
063/64	683.95	0.768	0.449	0.2017
064/65	963.36	0.409	0.090	0.0080
065/66	749.10	-0.222	-0.541	0.2931
Total		$R_m = 1.5959$		$(R_m \ Z \overline{R}_m)^2$ $= 0.5045$

(Source: Appendix 14 and 15)

$$ \text{–} \quad \sum \underline{\dfrac{R}{}} $$

\# Expected Return $(R_m) \ X \quad \dfrac{m}{n} \quad X 1.595 / 5 \quad X 0.319 \ = 31.9\%$

\# Standard Deviation $(\dagger_m) \ X \sqrt{\dfrac{\sum (R_m \ Z \ \overline{R}_m)^2}{n}} = \sqrt{\dfrac{0.5045}{5}} \ X 31.77\%$

\# Co-efficient of Variation (C.V.) $= \dfrac{\dagger_m}{\overline{R}_m} = \dfrac{0.3177}{0.319} \ X 0.99599$

105

Variance (V) = $(\sigma_m)^2 = 0.1008$

Figure 4.17

Market (NEPSE) Index movement (in %)
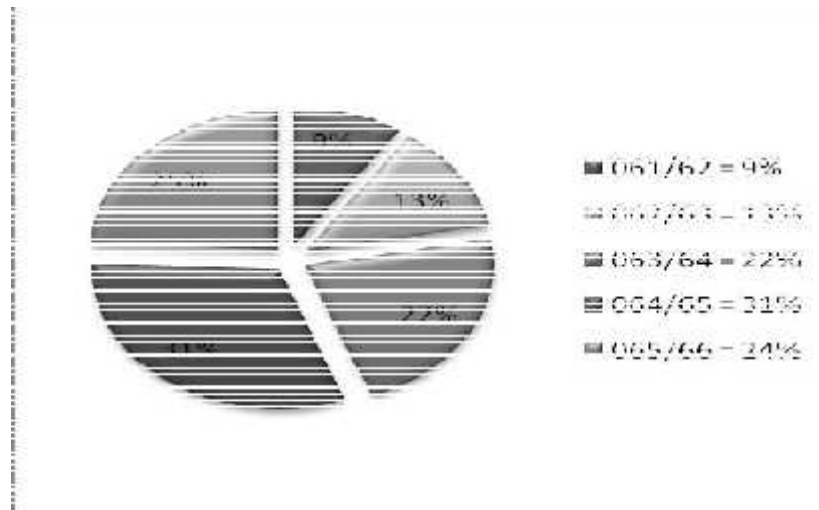
The NEPSE Index is very high in 2064/65 i.e. 963.36 and the lowest is 286.67 in 2061/62 during the period in this study. From the fiscal year 2061/62 to 2064/65, NEPSE index seems in increasing trend. However, in last fiscal year, the NEPSE Index starts to decrease in its value and reach down to 749.10 at fiscal year 2065/66. The year wise realized return of market is shown below.

Figure 4.18

Market Return Movement Ratio
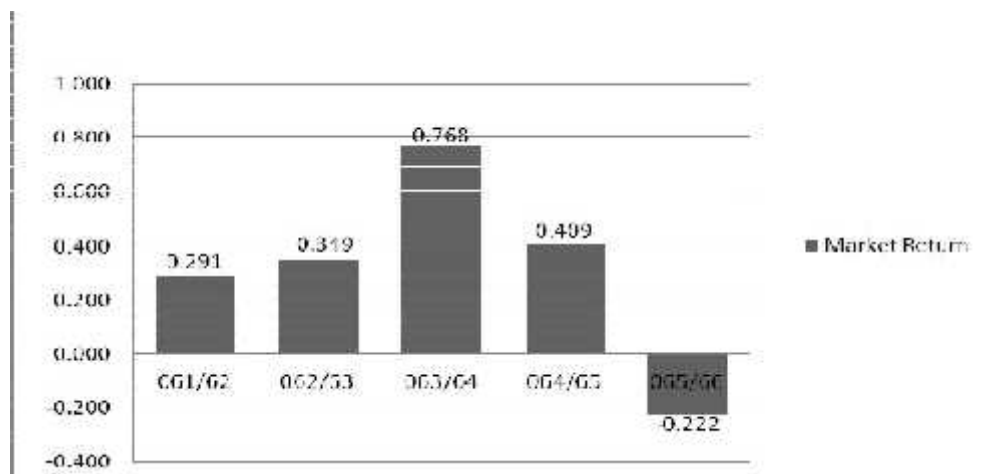
From the above diagram, we can see that the realized returns of the market is in negative trend up at the end of the study period but before that it is in positive trend up to fiscal year 2064/65. In FY 065/66, the market return is decreased from 963.36 to 749.10 which describe the negative return in market index. First four years of market return follows the positive return however the market return attracts the decreasing trend from FY 064/65. The market return in 063/64 seemed very high and rest of other year except 065/66 have quite good position of average return with 0.35 approx. But the return of last fiscal year carried down the average return of market in to 31.9% which is quite higher return than OFL and FFL. Inconsistency in return brought market risk position higher than OFL and FFL with 31.77%.

4.5.2 Measurement of Portfolio Performance

While performing portfolio management, risk and return has to be taken into consideration. Various methods are applied to measure the portfolio performance. For the simplicity of the study, here the Sharpe portfolio performance is chosen.

The Sharpe portfolio performance measure is based on the capital market line (CML) and total risk, which makes it more suitable for evaluating portfolios rather than individual assets. Sharpe measurement has been presented in table and graph below:

Table 4.17

Sharpe Portfolio Performance Measurement

Sharpe Measurement Contents	OFL	FFL	Market
Portfolio Return (R)	10.44	10.16	31.89
Risk Free Rate (R_f)	4.664	4.664	4.664
Portfolio s.d (σ_p)	0.70	0.30	31.77
Performance in %	**8.1904**	**18.1665**	**0.8572**

(Source: Appendix 14 and 16)

Figure 4.19

Sharpe Portfolio Performance Measurement
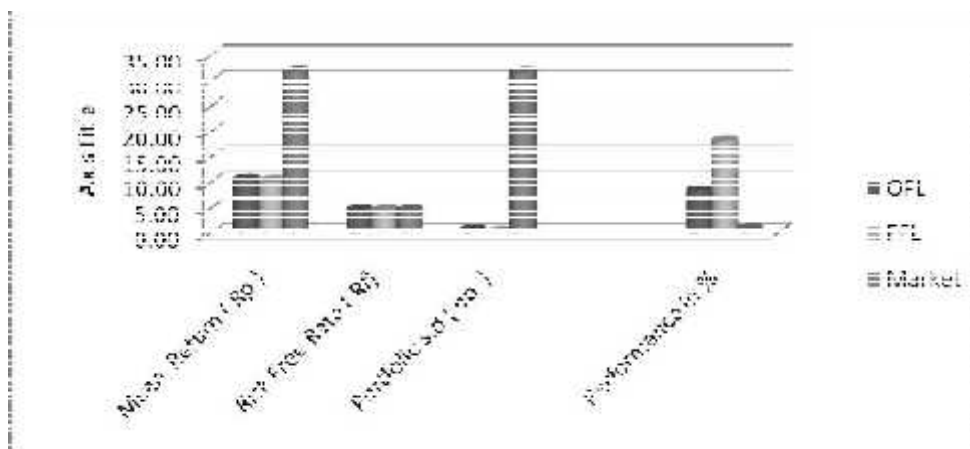
On the basis of Sharpe's concept on measurement of portfolio performance, market performance is the standard performance. On this basis, performance of other sectors' portfolio can be analyzed. If the portfolio which we want to observe has low performance percentage can be declared as low performed portfolio and vice versa. Therefore the market performance can not be overseen while measuring performance of portfolio using Sharpe measurement of portfolio performance.

The market rate of return on the basis of NEPSE's data over the study period is 31.89% with 31.77% of risk where the common average risk free rate declared by NRB over the study period is 4.664%. According to Sharpe measurement, market has obtained 0.8572% score for performance measurement. Same as OFL has fabricated 10.44% portfolio return with 0.70% risk. OFL obtained 8.1904% of performance score as per measurement of Sharpe portfolio performance. FFL has performed with 18.1665% score as FFL has generated 10.16% portfolio return with having 0.30% of risk. Therefore, it can we said concluded that both the finance companies have performed well in comparison to market during the study period which is presented in table and figure below:

Table 4.18

Ranking of Sharpe Portfolio Performance

Finance Ltd.	Performance Score	Compare with Market	Ranking
OFL	8.1904	Better than Market	2
FFL	18.1665	Better than Market	1
Market Score	0.8572	-	-

(Source: Appendix 16)

Figure 4.20

Ranking of Sharpe Portfolio Performance
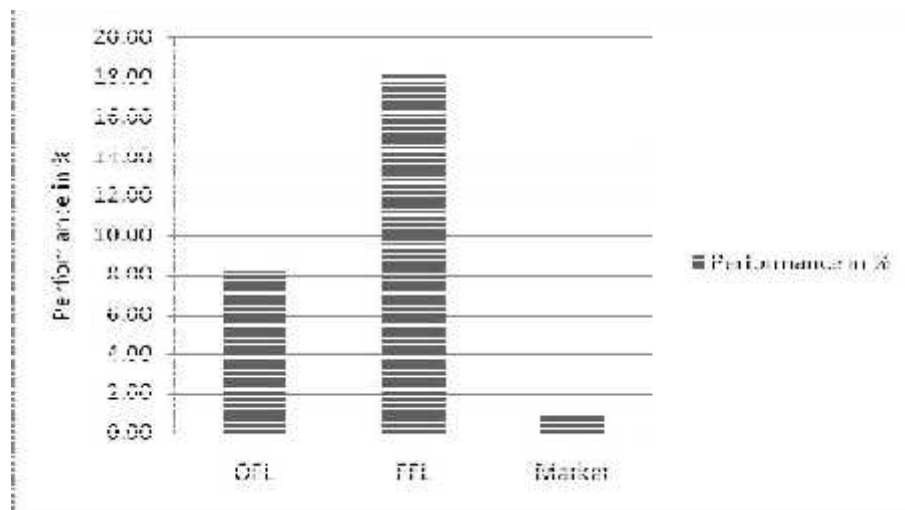
Finance company can be said on better performance position if the companies have more performance score than the market. OFL has performed good position with having 8.1904% of performance score which is higher than market performance score. And FFL has performed with 18.1665% score which is also again higher than market score. Both companies have well performed than

market but we have to rank finance companies according to

their performance score. As per table listed above it illustrates that FFL has performed better than OFL as it has higher score by more than 9% and also the graph located just above has plotted FFL higher than OFL. Therefore it is declared that FFL has performed a better performance than OFL during the study period on the basis of Sharpe portfolio performance measurement.

4.6   Major Findings of the Study

The major findings of the study on investment portfolio of Om Finance and Fewa Finance Limited are as follows:

1. The total investment of portfolio of OFL and FFL during the study period has been made on loan and advances, fixed deposit with other institutions, government securities, Share and debentures and others. Almost sent portion of investment has been made on loan and advances by both the finance limited. It is found that investment on loan and advances made by OFL on 065/66 is the highest among the years of the study period with 98.80% investment. And the lowest investment on loan and advances made by OFL is 94.21% on 062/63. In another side, FFL has made highest investment on loan and advance is 99.91% on 063/64 and lowest investment on the same is 95% in 061/62.

2. The trend of investment on loan and advances has been increasing year to year during the study period of OFL and almost the same portion of investment has been made by FFL on loan and advances over the period. Maximum investment made in Government securities is 1.23%, Share and debenture is 0.27% and fixed deposit is 4.24% by OFL. That was OFL's first investment in those sectors during the study period, the investment sectors except loan and advances have adopted decreasing trend after the investment. Maximum investment made in Government securities is 0.22%,

Share and debenture is 0.01%, fixed deposit is 4.77% and other is 0.29% by FFL. That was FFL's first investment in those sectors during the study period, the investment sectors except loan and advances have adopted decreasing trend after the investment in FFL also. No investment was made in share and debenture and Fixed deposit after 061/62 by FFL. Finally the mean investment of Loan and advances has reached to 96.85% and 98.83% in OFL and FFL respectively which has highly dominated rest of the other investment sectors.

3. OFL and FFL have made investment in four different categories of Loan and advances and they are: - Hire Purchase, Housing, Term and Fixed Loan. In the first year, Term loan has dominated other sectors in OFL and rest of the years were dominated by housing loan. In OFL, housing loan has occupied more than 50% of total loan. In other side, Term loan has dominated other sectors in the first four years of FFL but FY 065/066 was dominated by housing loan. The main investment sector of loan and advances is housing loan for both the finance companies and second investment sector is Term loan. Hire purchase and fixed loan have got third and forth priority respectively.

4. Vehicles and machines were invested under hire purchase loan by both finance companies where obviously vehicle has occupied the major part of investment. OFL has made 9.8% investment of total loan in hire purchase loan and generated 11.78% return with 2.36% of risk. For the same category, FFL has made 22.7% investment of total loan in hire purchase and generated 10.03% return with 0.72% of risk. Here, the profit generated by OFL is higher than FFL in hire purchase but the percentage invested by OFL is significantly lower than FFL.

Variation over the investment in hire purchase by OFL has

caused inconsistency in return which helped to increase risk of the company. And also OFL has been following the decreasing investment trend for hire purchase where FFL has been increasing their investment by year to year.

5. Housing loan is the largest sector where Finance companies have invested their funds. Here, OFL has made 51.4% investment of total loan in housing loan and generated 10.19% return with 1.11% of risk. For the same category, FFL has made 39.6% investment of total loan in housing and generated 10.39% return with 1.11% of risk. With same position of risk and low investment, FFL has succeeded to generate higher profit than OFL.

6. OFL and FFL have their huge investment in housing loan with increasing trend of investment. As per NRB direction, financial institutions should deduct their housing loan under 40% of total loan. It is noticed that OFL will face more difficulties to maintain the bracket directed by NRB than FFL. The profit of the organization will definitely decrease due to trim down of investment in housing loan. Investment alternatives are limited in Nepal for financial institutions and again investment areas get narrowed if investment in housing loan make down.

7. Term loan is generally provided for education, agriculture, tourism, health etc. Small business and Industry occupy the major portion of term loan. The weight of both finance limited in term loan are almost equal, OFL has invested 36.1% and FFL has made 36.3%. Likewise, the return of both companies is about to equal, OFL prevailed 10.54% and FFL prevailed 10.07%. OFL generated the return by bearing 1.13% of risk in where FFL generated the return with 0.67%

of risk only. Both companies have been reducing their portion investment in term loan year by year.

8. Investment in fixed loan made by OFL is between 1% to 5% and FFL is between 1% to 2% only. OFL has made 2.8% investment of total loan and advances during the study period where as FFL has made 1.3% only. Comparatively OFL has made higher investment than FFL and has gained higher return also. OFL has generated 8.87% of return and FFL has generated only 8.25%. FFL generated profit with 3.34% of risk where as OFL has played 3.86% risk.

9. The return on total assets ratio of OFL and FFL are found between 1.80% to 2.10% and 2.07% to 2.51% respectively. OFL has generated the highest return on first year of the study period and FFL has generated on FY 064/65. Therefore it is found that FFL has more fluctuation than OFL. S.D. and C.V. both found higher in FFL than OFL which illustrates that FFL has less consistency in generating return on assets.

10. It is found that each company has high ROE in first study period and later it has been decreasing year to years. FFL has been maintaining ROE more than 30% in every year except on FY 062/63 but OFL has been loosing the percentage of ROE year to year. Mean is found satisfactory for both limited. Because of higher standard deviation and lower mean, OFL is found less consistent on ROE than FFL.

11. The return on Investment of OFL has been decreasing from 061/62 to 065/66 where the minimum return is 2.01% and the highest is 2.46%. FFL has maintained its ROI more than 2.46% which is maximum return of OFL. And the maximum return of ROI is found in 064/65

with 2.92%. High standard deviation and coefficient of

variation comparatively with OFL, FFL is found less consistent and variable over the return on investment.

12. FFL has been maintaining comparatively higher weighted average interest spread ratio than OFL from the starting to end of the study period. It depicts that the return of FFL is higher than OFL. The highest ratio of OFL and FFL is 5.86% and 6.19% in 061/62 respectively over the study period for both the limited. The ratio of OFL and FFL has decreased down to 4.05% and 4.79% respectively at 065/66 which is the lowest rate for FFL. The lowest ratio of OFL is 3.74% in 064/65. Mean weighted average interest spread ratios over five study years are found to be 4.56% in OFL and 5.41% in FFL. OFL has more C.V. for the ratio by 6% than OFL which shows the inconsistency over the ratio.

13. The loan and advances portfolio return of OFL is found higher than FFL during the study period. OFL and FFL have highest portfolio return in housing loan with 5.234% and 4.114% respectively. Hire purchase loan has portfolio return more than 1% in both companies and fixed loan has the return below 1%. Term loan has 3.804% and 3.664% portfolio return in OFL and FFL respectively. The portfolio return, in aggregate, of OFL is 10.44% and FFL is 10.16% during the study period. Therefore considering portfolio return only, OFL is found better than FFL.

14. Hire purchase and Housing loan, Hire Purchase and Term loan, Hire purchase loan and Fixed loan of OFL and Hire Purchase & Housing Loan, Hire Purchase & Fixed Loan and Term Loan & Fixed Loan of FFL have positive covariance and indicate positive tend for positive move and rest of sectors have negative covariance which indicates

tend for negative move at the same time. Hire purchase and

Housing loan, Hire Purchase and Term loan, Hire loan and fixed loan in OFL have positive correlation where risk has been reducing by the portfolio and rest of other sectors correlation illustrated that the risk can be reduced for those sectors. Term Loan & Fixed Loan of FFL have positive correlation around 0.75, therefore the risk associated with the returns of those sectors has been reducing through the portfolio but rest sector's correlation shows the risk associated with the returns can be reduced.

15. OFL has generated 10.44% return from the portfolio where 10.16% return was generated by FFL. OFL has 0.70% portfolio risk associated with the return where FFL just has 0.30% portfolio risk in order to gain the return. From this analysis we can say that FFL has been maintaining a good position than OFL because FFL has generated almost the same profit with lower risk.

16. NEPSE index has been increasing in every year of study period till FY 064/65. From the fiscal year 2061/62 to 2064/65, it was increased from 286.67 to 963.36 but the NEPSE Index has started to decrease its closing value and reached down to 749.10 at fiscal year 2065/66. The situation has leaded the index in negative return for that particular year. Because the return of the market was too much variable and inconsistent, the position of market is also found highly risky. Finally market rate of return and market risk are settled at 31.89% and 31.77% respectively.

17. As per Sharpe measurement, market has obtained 0.8572% score for performance measurement. Same as OFL has fabricated 10.44% portfolio return with 0.70% risk. OFL obtained 8.1904% of performance score as per measurement of Sharpe portfolio

performance. FFL has performed with 18.1665% score as FFL has

generated 10.16% portfolio return with 0.30% of risk. Therefore both finance companies have been performed well than market performance during the study period. FFL has performed better than OFL as it has higher score by more than 9%. Therefore it is declared that FFL has performed a better performance than OFL during the study period and ranked as the best among the selected companies for study.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The objective of this study is to summarize the whole study. Therefore this chapter consists of three major contents. First is summary of the study, second is conclusion and final one is suggestions and recommendations on the basis of finding of the study.

5.1   Summary

This study is basically conducted to fulfill the requirement for completion of Master's degree which is focused on Investment Portfolio. Two finance companies - Om finance limited and Fewa finance limited are selected on different basis for the study. The study focuses on existing process, situation, structure and results are carefully observed on the basis of decision science. This study has been undertaken to examine and analyze the trend in investment, criteria of investment in real estate, profitability position, investment portfolio risk and return and portfolio performance. This study helps to make improvement on investment portfolio.

The data for the study has collected through different sources and used both types of data in the study- primary and secondary. Researcher has taken structured interview with different officials related to the studies. The study has covered five years period from F.Y. 2061/62 to 2065/66. After collecting data from various sources, descriptive and analytical methods of research design were used to analyze the data. And the data for those years have been analyzed by using financial, mathematical and statistical tools in the study for meaningful

results.

The total investment of portfolio of OFL and FFL during the study period has been made on loan and advances, government securities, Share and debentures and others. Almost sent portion of investment has been made on loan and advances by both the finance limited. The trend of investment on loan and advances has been increasing by year to year during the study period of OFL and almost the same portion of investment has been made by FFL on loan and advances over the period. Finally the mean investment of Loan and advances reached to more than 96% in both the finance companies which highly dominated rest of the other investment sectors. OFL and FFL have made investment in different four categories of Loan and advances- Hire Purchase, Housing, Term and Fixed Loan. In first year Term loan has dominated other sectors in OFL and rest of years were dominated by housing loan. In OFL, housing loan has occupied more than 50% of total loan. On the other hand, Term loan has dominated other sectors in first four years of FFL but 065/066 was dominated by housing loan. The main investment sector of loan and advances is housing loan for both the finance companies and secondly is term loan. Hire purchase and fixed loan have got third and forth priority respectively. OFL has generated the highest return on assets in the first year of study period and FFL has generated on 064/65. It is found that FFL has more fluctuation in return on assets than OFL. FFL has less consistency in generating return on assets than OFL. It is found that each company has high ROE in first study period and later it has been decreasing year to years. FFL has been maintaining ROE more than 30% in every year except FY 062/63 but OFL has been loosing the percentage of ROE year to year. OFL is found less consistent on ROE than FFL. FFL is found less consistent and variable over the return on investment as it has maintained ROI more than 2% in every. FFL has been maintaining comparatively higher weighted average interest spread ratio than OFL from the starting to end of the study period. It depicts that the net income on loan and advances of FFL is high than OFL. The loan and advances portfolio return of FFL is found higher than OFL during the study period. OFL and FFL have highest portfolio return in

housing loan. Considering portfolio

return only, OFL is found better than FFL. Hire purchase and Housing loan, Hire Purchase and Term loan, Hire purchase loan and fixed loan of OFL and Hire Purchase & Housing Loan, Hire Purchase & Fixed Loan and Term Loan & Fixed Loan of FFL have positive covariance and indicate positive trend for positive move. OFL has generated more return associated with high risk from the portfolio than FFL. Because the return of the market was too much variable and inconsistent, the position of market is also found highly risky. Finally both finance companies have performed well than market during the study period. FFL has performed better than OFL as it has higher score in Sharpe portfolio performance measurement than FFL during the study period and ranked as the best among the selected companies for study.

5.2   Conclusion

Analyzing all the data and capturing some of the findings from the analyzed data, this is the part where some of conclusions are drawn.

5.2.1   The trend of investment in OFL and FFL shows that the large investment has been made on loan and advances. Secondly they have focused fixed deposit with other institutions, thirdly government securities and finally shares and debentures. This is concluded that both the finance companies have managed their investment to earn moderate profit but they have not sufficiently diversified their investment as much as the investment alternative available.

5.2.2   OFL and FFL have made investment in different four categories of Loan and advances- Hire Purchase, Housing, Term and Fixed Loan. The main investment sector of loan and advances is housing loan for both the finance companies and secondly is term loan. Hire purchase and fixed loan have got third and forth priority respectively. Housing loan has occupied more than half portion of the investment in OFL and fixed loan has absorbed negligible share of total investment in both the finance companies. As the term loan is the investment in productive sector, the investment made by OFL being highly

focused on unproductive sectors than FFL.

5.5.3 As OFL has made investment in housing loan more than half of the total investment, OFL will face more difficulties than FFL while maintaining the criteria circulated by NRB which rules that total investment in housing loan must not be more than 40% of total investment and 30% by the end of 2068 Asadh. It will increase the percentage of loan loss which will directly hit to profit of organization.

5.5.4 Low return on assets indicates that it has not been able to earn adequate profit. Both companies have low return on assets. The return on total assets ratio of OFL is found lower than FFL. It is concluded that FFL has been utilizing the assets more profitably than FFL. But FFL has less consistency in generating return on assets than OFL.

5.5.5 OFL and FFL both have been maintaining high return on equity since the starting years of study period. FFL has more return and less consistency on return on equity than OFL. Therefore from the return on equity's point of view FFL is found in stronger position than OFL.

5.5.6 Profit of FFL on total investment is higher than OFL but found less consistent and high risky. But the profit of the companies is not in satisfied level as per their investment. ROI measures management effectiveness over the available resources in generating profit. Higher profit is the signal of better management. Therefore the effectiveness over the available resources of both companies is not in satisfied position but comparatively FFL is found in better position.

5.5.7 FFL has been maintaining comparatively higher weighted average interest spread ratio than OFL from the starting to end of the study period.

5.5.8 Loan and advances portfolio return of OFL is found higher than FFL and risk is higher in OFL than FFL. The combination of investment in hire purchase loan with other sectors of loans is found positive in trend. From this analysis it is found that FFL has been maintaining a good position than OFL because FFL has

generated almost the same profit with lower risk.

5.5.9 The return of the market is found too much variable and inconsistent with the negative return in one year of the study period; the position of market is found highly risky. As per Sharpe portfolio performance measurement, both finance companies have performed well than market and FFL has performed better than OFL during the study period.

5.3   Recommendations

The following recommendation may be useful to overcome the weakness, inefficiencies of investment of OFL and FFL. All the recommendations are based on analysis, findings and conclusions.

5.3.1 Financial organizations are the legal institutions for collecting scattered money within the country. As they have such funds of the country, it is their legal obligation to make investment in developing and productive sectors of the country.

5.3.2 It is now time to think about the alternative of loan and advances. Because almost sent percent of the funds are engaged in loan and advances, it is not good for health of nations in long term and highly risky for banking chain also. It is recommended to focus on dynamic, innovative areas like merchant banking, consortium finance, venture capital and share in hydropower as long term investment. NRB must think about the alternative of investment on time before any disasters happen in banking sectors.

5.3.3 OFL and FFL both have higher return, expected return and lower risk in hire purchase than housing loan. Therefore both companies should increase their investment in hire purchase by reducing investment in housing loan. Especially OFL must deduct the housing loan by making investment in hire purchase loan in order to meet the criteria circulated by NRB.

5.3.4 Market risk is so high comparative to its return. Governing body and NRB must play role to decrease the risk of market and provide space for banking

sectors to make investment in securities, shares and debentures.

5.3.5 The return of both financial institutions is lower than market return. The market return shows that there is a possibility to generate high return. Therefore both finance companies must focus their investment activities in order to make higher profit than existing.

5.3.6 Profitability is the most important tools for measurement performance of company. OFL and FFL have fluctuating trend in profitability position during the study period. Trust of equity holders and other stakeholders play a vital role for organization's survival in long run as they believe on profit. In order to make better profitability position, OFL and FFL both have to manage their resources efficiently.

5.3.7 OFL must try to make high and consistent investment in term loan and hire purchase. It will definitely decrease the risk and increase return of loan and advances portfolio.

5.3.8 Investors need to diversify their fund to reduce the risk. Proper construction of portfolio will reduce considerable potential loss, which can be defined in term of the risk but portfolio construction is dynamic and difficult job. Thus, investor should select the stocks that have higher return and negative correlation or near to zero correlation between different companies and sector. The portfolio revision is also necessary at certain interval of time to get best return at lower risk.

5.3.9 Investment on government securities, share and debentures may be increased in order to diversify the risk while increasing high return in portfolio.

5.3.10 Portfolio management is a dynamic subject matter, which changes at a flash. It is ever challenging. There should be regular research in portfolio management. Corporate body and individual investor are strongly recommended to make regular research on portfolio managements.

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Appendix 1

General Questionnaire

1.2   How many staffs are enrolled in your organization?

1.3   How many staffs are involved in investment department?

1.4   How do you select investment sector?

       as per need of customer

       as per NRB directives

       by measuring risk and return

       All of them

1.5   How long does your company invest in terms of years?

       1-3 yrs

       4-6 yrs

       7-10 yrs

       none of them

1.6   Investment in loan and advances highly dominate the investment in government securities. Is it mandatory to invest in government securities?

       Yes

       No

1.7   Why the investment is totally focused on loan and Advances instead of other sector?

       limited investment opportunities

       low return

       Unsuitable investment Environment

       All of them

1.8   How does the investment of your company support the nation for its development? Is investment in loan and advances only can help the development?

       Partially

Fully

c) doesn't help

d) Indirectly helps

8) On what base, loan and advances are provided to the customers?

   a) Educational Status

   b) Collateral and Cash flow

   c) Physical and Mental Condition

   d) All of them

9) What percent of the collateral do you approve for loan?

   a) Up to 25 %

   b) 25 – 50 %

   c) 50 – 75%

   d) 75 – 100%

10) How is the valuation of collateral done?

   a) By external evaluator

   b) By internal evaluator

11) Do you have any provision for investment in deprived sector?

   a) Yes

   b) No

12) How much the government policy suitable for banking sector ?

   a) Highly suitable

   b) Moderate

   c) Low facility and less supportive

   d) Good but not enough

13) What are the factors that affect investment environment including government?

14) What kind of problems do you face during the investment process?

Questionnaire on real estate?

2   How would you like to define real estate?

3   Is it better to invest in real estate and housing if the matter is for development of nation?

4   What proportion is been occupied by real estate loan under housing loan category since last five years?

5   In last few years, the rate of land in Pokhara increased unnaturally, what do you think, is this because of financial institution's involvement in providing loan especially for real estate?

On 02 Poush 2066, NRB had announced a circulation with three major directions toward the loan and advances criteria which were;

    a) Total loan and Advances shouldn't be more than 80% of Local Deposit and Primary Capital

    b) Loan amount on real estate shouldn't cross the limit of 60% of Fair Market Value of the collateral asset.

    c) Real estate loan amount shouldn't be more than 25% of total loan and advances amount. And both sum of real estate and housing loan shouldn't be more than 40% of total loan and advances.

5)   Isn't it difficult to manage investment going through these types of directives?

6)   Does the circulation help to promote investment anyway?

7)   Is it necessary to circulate the directive by NRB?

8)   What do you think, what was the objective behind the circulation?

    a) To control the fictitious rate in real estate trading.

b) To prevent liquidity crisis

c) To minimize the risk associates with real estate loan and advances

All of them

6.   What do you think what are the merits and demerits of the circulation on your company?

7.   Investment on loan and advances is now more than 90% of local deposit and primary capital, what will be your strategy to deduct the loan in order to meet the criteria?

8.   On what base, loan and advances are provided to the customers?

Educational Status

Collateral and Cash flow

Physical and Mental Condition

All of them

11) Which percent of the collateral does approve for loan?

(a) Up to 25 %

(b) 25 – 50 %

(c) 50 – 75%

(d) 75 – 100%

12) What proportion is been occupied by real estate loan under housing loan category since last five years?

Questionnaire on real estate for NRB

1) Has Nepal a suitable environment for investment in current situation for financial Institutions?

2) What may be the investment sectors for financial institutions in Nepal?

3) What was the condition of real estate and banking sector's loan for real estate that NRB was compelled to announce Poush 2, 2066 circulation?

4) Can we assume that the financial institutions are in bad condition from the point view of real estate loan and advances?

5) Does it so much risky to invest in real estate than other sectors?

6) Is it possible to deduct the loan amount to 80% of local deposit and primary capital?

4) Why did NRB set the criteria of "not more than 6 0% investment on collateral of real estate loan"? Why not for other loan?

5) Which sector is highly invested as loan and advances by financial institution?

6) If housing and real estate loan was highly preferred by financial institution, how is it possible to deduct the total amount below than 40% of total advances? What kind of strategies financial institution can be followed?

7) What is the main objective of the circulation?

8) What may be the merits and demerits of the circulation?

9) Because the circulation hit direct to the major part of loan investment of financial institutions, what will NRB says if financial institutions demand for providing option of real estate loan and advances with NRB?

Appendix 2

Investment of OFL (Rs in million)

FY	Loans and Advances	Government Securities	Shares and Debentures	Fixed Deposit on foreign Financial Institution	Other	Total
061/62	363.95	4.55	1.00	-	-	369.50
062/63	456.57	4.55	1.00	22.50	-	484.62
063/64	650.45	4.55	1.03	25.00	-	681.03
064/65	895.83	4.55	1.03	20.00	-	921.41
065/66	1,280.28	4.55	1.03	10.00	-	1,295.86

Investment of FFL (Rs in million)

FY	Loans and Advances	Government Securities	Shares and Debentures	Fixed Deposit on foreign Financial Institution	Other	Total
061/62	240.98	0.55	0.02	12.10	-	253.65
062/63	405.80	0.55	-	-	-	406.35
063/64	624.44	0.55	-	-	-	624.99
064/65	854.50	0.55	-	-	2.50	857.55
065/66	1,123.93	0.55	-	-	2.50	1,126.98

(Source : Annual Reports of OFL and FFL)

Investment of OFL and FFL (in %)

FY	OFL						FFL					
	Loans & Adv.	Gover. Secu.	Shares & Deb.	Fixed Dep.	Oth.	Total	Loans & Adv.	Gover.Secu.	Shares & Deb.	Fixed Dep.	Oth.	Total
061/62	98.50	1.23	0.27	0.00	0.00	100.00	95.00	0.22	0.01	4.77	0.00	100.00
062/63	94.21	0.94	0.21	4.64	0.00	100.00	99.86	0.14	0.00	0.00	0.00	100.00
063/64	95.51	0.67	0.15	3.67	0.00	100.00	99.91	0.09	0.00	0.00	0.00	100.00
064/65	97.22	0.49	0.11	2.17	0.00	100.00	99.64	0.06	0.00	0.00	0.29	100.00
065/66	98.80	0.35	0.08	0.77	0.00	100.00	99.73	0.05	0.00	0.00	0.22	100.00
Mean	96.85	0.74	0.16	2.25	0.00	100.00	98.83	0.11	0.002	0.95	0.10	100.00

Appendix 3

Sector wise Investment in Loan and Advances of OFL (Rs in million)

FY	Hire Purchase	Housing Loan	Term Loan	Fixed Loan	Total
061/62	52.70	144.39	160.18	6.67	363.95
062/63	41.09	246.55	159.80	9.13	456.57
063/64	58.54	331.73	253.68	6.50	650.45
064/65	76.06	497.19	306.82	15.77	895.83
065/66	128.03	652.95	435.30	64.01	1,280.28
Total	356.42	1,872.80	1,315.78	102.09	3,647.09
Mean	71.28	374.56	263.16	20.42	729.42
S.D.	30.53	180.96	102.87	22.06	330.27
C.V.	0.43	0.48	0.39	1.08	0.45
Weight(w)	9.77%	51.35%	36.08%	2.80%	100.00%

Calculation of Mean , Standard Deviation and Coefficient of Variation for Om Finance Limited's Hire Purchase Loan

Fiscal Year	Hire Purchase Investment(HI)	$HI - \overline{HI}$	$(HI - \overline{HI})^2$
061/62	52.70	-18.58	345.20
062/63	41.09	-30.19	911.64
063/64	58.54	-12.74	162.40
064/65	76.06	4.77	22.77
065/66	128.03	56.74	3,219.91
Total	356.42		4,661.91

$$\sum H$$

Mean Investment $= Mean(HI) = \dfrac{\sum HI}{n} = \dfrac{356.42}{5} = 71.28$

Standard Deviation (S.D.) $= \sigma = \sqrt{\dfrac{\sum (HI - \overline{HI})^2}{n}}$

$= \sqrt{\dfrac{4661.91}{5}} = 30.53$

Coefficient of Variation (C.V.) $= \dfrac{\sigma_{HI}}{\overline{R}_{HI}}$

$= \dfrac{30.53}{71.28} = 0.43$

In where , HI = Hire Purchase Loan Investment

And the same way of calculation is carried out for other investment sectors , ROA, ROE, ROI and weighted average interest spread ratio for both Finance

limited.

Sector wise Investment in Loan and Advances of FFL (Rs in million)

FY	Hire Purchase	Housing Loan	Term Loan	Fixed Loan	Total
061/62	51.71	92.20	95.21	1.86	240.98
062/63	77.10	158.26	162.32	8.12	405.80
063/64	137.38	231.04	243.53	12.49	624.44
064/65	213.62	299.07	333.25	8.54	854.50
065/66	258.50	505.77	348.42	11.24	1,123.93
Total	738.31	1,286.35	1,182.73	42.25	3,249.65
Mean	147.66	257.27	236.55	8.45	649.93
S.D.	78.65	142.29	97.37	3.68	314.33
C.V.	0.53	0.55	0.41	0.44	0.48
Weight(w)	22.72%	39.58%	36.40%	1.30%	100.00%

(Source : Annual Reports of OFL and FFL)

Sector wise Investment of Loan and Investment in Percent

FY	OFL					FFL				
	Hire Purch.	Housing Loan	Term Loan	Fixed Loan	Total	Hire Purch.	Housing Loan	Term Loan	Fixed Loan	Total
061/62	14%	40%	44%	2%	100%	21%	38%	40%	1%	100%
062/63	9%	54%	35%	2%	100%	19%	39%	40%	2%	100%
063/64	9%	51%	39%	1%	100%	22%	37%	39%	2%	100%
064/65	8%	56%	34%	2%	100%	25%	35%	39%	1%	100%
065/66	10%	51%	34%	5%	100%	23%	45%	31%	1%	100%

Appendix 4

Interest Income of Loan and Advances (Rs in million)

FY	Om Finance Company				Fewa Finance Company			
	Hire Purchase	Housing Loan	Term Loan	Fixed Loan	Hire Purchase	Housing Loan	Term Loan	Fixed Loan
061/62	6.99	17.33	16.88	0.53	5.86	10.68	8.87	0.27
062/63	6.39	23.57	19.37	0.94	7.50	16.12	15.81	0.37
063/64	5.76	33.93	22.91	1.01	13.09	25.17	23.73	0.60
064/65	8.50	43.01	35.04	1.02	19.88	32.70	33.40	0.93
065/66	11.62	68.71	41.83	2.65	26.55	42.25	39.57	1.47
Total	**39.26**	**186.56**	**136.03**	**6.15**	**72.87**	**126.93**	**121.38**	**3.63**

(Source : Data provided by OFL and FFL)

Appendix 5

Return on Total Assets

FY	Om Finance			Fewa Finance		
	Net Profit	Total Assets	Ratio(%)	Net Profit	Total Assets	Ratio
061/62	9.08	432.35	2.10%	6.92	278.46	2.48%
062/63	10.88	586.71	1.86%	9.99	476.78	2.09%
063/64	13.69	761.78	1.80%	17.03	685.28	2.49%
064/65	18.68	1,152.13	1.62%	25.02	997.09	2.51%
065/66	26.14	1,452.81	1.80%	29.01	1,401.66	2.07%
Mean			1.83%			2.33%
S,D.			0.15%			0.20%
C.V.			8.40%			8.66%

(Source : Annual Reports of OFL and FFL)

Appendix 6

Return on Total Equity

	Om Finance			Fewa Finance		
FY	**Net Profit**	**Equity**	**Ratio(%)**	**Net Profit**	**Equity**	**Ratio(%)**
061/62	9.08	20.00	45%	6.92	20.00	35%
062/63	10.88	50.00	22%	9.99	50.00	20%
063/64	13.69	70.00	20%	17.03	50.00	34%
064/65	18.68	70.00	27%	25.02	70.00	36%
065/66	26.14	104.96	25%	29.01	91.00	32%
Mean			27.66%			31.25%
S,D.			9.20%			5.78%
C.V.			33.27%			18.49%

(Source : Annual Reports of OFL and FFL)

Appendix 7

Return on Total Investment

	Om Finance			Fewa Finance		
FY	**Net Profit**	**Total Assets**	**Ratio(%)**	**Net Profit**	**Total Assets**	**Ratio(%)**
061/62	9.08	369.50	2.46%	6.92	253.65	2.73%
062/63	10.88	484.62	2.25%	9.99	406.35	2.46%
063/64	13.69	681.03	2.01%	17.03	624.99	2.73%
064/65	18.68	921.41	2.03%	25.02	857.55	2.92%
065/66	26.14	1,295.86	2.02%	29.01	1,126.98	2.57%
Mean			2.15%			2.68%
S,D.			0.18%			0.16%
C.V.			8.20%			5.84%

(Source : Annual Reports of OFL and FFL)

Appendix 8

Weighted Average Interest Spread Ratio

FY	OFL	FFL
061/62	5.86%	6.19%
062/63	4.72%	5.72%
063/64	4.44%	5.46%
064/65	3.74%	4.90%
065/66	4.05%	4.79%
Mean	4.56%	5.41%
S,D.	0.73%	0.52%
C.V.	16.00%	9.61%

(Source : Annual Reports of OFL and FFL)

Appendix 9

Calculation of Expected and Portfolio Return on Loan and advances of

OFL and FFL

(Interest Income in % as Return of Loan and Advances)

FY	Om Finance Company				Fewa Finance Company			
	Hire Purchase	Housing Loan	Term Loan	Fixed Loan	Hire Purchase	Housing Loan	Term Loan	Fixed Loan
061/62	13.27	12.00	10.54	7.94	11.33	11.59	9.46	8.01
062/63	15.56	9.56	12.12	10.35	9.72	10.19	9.74	4.50
063/64	9.83	10.23	9.03	15.46	9.53	10.89	9.75	4.83
064/65	11.17	8.65	11.42	6.49	9.31	10.93	10.02	10.83
065/66	9.08	10.52	9.61	4.13	10.27	8.35	11.36	13.07
Total	**58.91**	**50.97**	**52.72**	**44.36**	**50.15**	**51.96**	**50.33**	**41.24**
Expected Return ($\overline{R_m}$)	11.78	10.19	10.54	8.87	10.03	10.39	10.07	8.25
Weight (w)	9.77%	51.35%	36.08%	2.80%	22.72%	39.58%	36.40%	1.30%
Portfolio return ($\exists$R)	1.151	5.234	3.804	0.248	2.279	4.114	3.664	0.107

Appendix 10

Calculation of Sector wise risk and Portfolio Risk of Loan and advances - Om Finance Limited

All Figures are %

Assume that:

		In where		
A	=	Hire Purchase	W	= Weight
B	=	Housing Loan	Э X	Standard deviation
C	=	Term Loan	†1²	= Variance
D	=	Fixed Loan	Эp	= Portfolio standard deviation
R	=	Return		

Step 1: Calculation of Expected Return

FY	R_A	R_B	R_C	R_D
061/62	13.27	12.00	10.54	7.94
062/63	15.56	9.56	12.12	10.35
063/64	9.83	10.23	9.03	15.46
064/65	11.17	8.65	11.42	6.49
065/66	9.08	10.52	9.61	4.13
Exp. Return ($\bar{R}$)	11.78	10.19	10.54	8.87

Step 2: Return minus Expected Return

FY	$R_A - \bar{R}_A$	$R_B - \bar{R}_B$	$R_C - \bar{R}_C$	$R_D - \bar{R}_D$
061/62	1.48	1.81	-0.01	-0.94
062/63	3.78	-0.63	1.57	1.47
063/64	-1.95	0.03	-1.51	6.59
064/65	-0.61	-1.54	0.88	-2.39
065/66	-2.70	0.33	-0.93	-4.74

Step 3: Calculation of Variance and Standard deviation

FY	$(R_A - \bar{R}_A)^2$	$(R_B - \bar{R}_B)^2$	$(R_C - \bar{R}_C)^2$	$(R_D - \bar{R}_D)^2$
061/62	2.20	3.27	0.00	0.88
062/63	14.27	0.40	2.48	2.17
063/64	3.80	0.00	2.28	43.38
064/65	0.37	2.38	0.77	5.69
065/66	7.31	0.11	0.87	22.45
Total	27.95	6.16	6.40	74.58
†1²	5.59	1.23	1.28	14.92
†	2.36	1.11	1.13	3.86

Step 4: Calculation of Covariance, Multiplied covariance by 2 and concerned sector's weight

FY	$(R_A - \bar{R}_A)(R_B - R_B)$	$(R_A - R_A)(R_C - R_C)$	$(R_A - R_A)(R_D - R_D)$	$(R_B - R_B)(R_C - R_C)$	$(R_B - R_B)(R_D - R_D)$	$(R_C - R_C)(R_D - R_D)$
	A x B	A x C	A x D	B x C	B x D	C x D
061/62	2.68	-0.01	-1.39	-0.01	-1.69	0.01
062/63	-2.39	5.95	5.57	-0.99	-0.93	2.32
063/64	-0.07	2.95	-12.84	-0.05	0.23	-9.96
064/65	0.94	-0.53	1.45	-1.35	3.68	-2.09
065/66	-0.89	2.52	12.81	-0.31	-1.57	4.42
Total	0.27	10.88	5.60	-2.72	-0.28	-5.30
COV	0.05	2.18	1.12	-0.54	-0.06	-1.06
Formula's '2'	2.00	2.00	2.00	2.00	2.00	2.00
W_A	0.10	0.10	0.10			
W_B	0.51			0.51	0.51	
W_C		0.36		0.36		0.36
W_D			0.03		0.03	0.03
2 x Wx COV	0.0054	0.1534	0.0061	-0.2014	-0.0016	-0.0214

Step 5: Mutiplication of variance and square of weight

	A	B	C	D		
W	0.10	0.51	0.36	0.03		
Э²	2.36	1.11	1.13	3.86		
W^2	0.01	0.26	0.13	0.00		
Э²	5.59	1.23	1.28	14.92		
$W^2 Э^2$	0.05	0.32	0.17	0.01		

Now, Putting the values in the forumla;

$$\dagger_p \ X = \sqrt{W_A^2 \dagger_A^2 \dashv W_B^2 \dagger_B^2 \dashv W_C^2 \dagger_C^2 \dashv W_D^2 \dagger_D^2 \dashv 2W_AW_B\,Cov(R_A, R_B) \dashv 2W_AW_C Cov(R_A, R_C) \dashv 2W_AW_D Cov(R_A, R_D) \dashv 2W_BW_C\,Cov(R_B, R_C) \dashv 2W_BW_D Cov(R_B, R_D) \dashv 2W_CW_D Cov(R_C, R_D)}$$

$$\dagger 1_p \ X = \sqrt{0.05 \dashv 0.32 \dashv 0.17 \dashv 0.01 \dashv 0.0054 \dashv 0.1534 \dashv 0.0061 \dashv (\angle 0.2014) \dashv (\angle 0.0016) \dashv (\angle 0.0214)}$$

$$Эp = \sqrt{0.5}$$

Эp = 0.705

Appendix 11

Calculation of Sector wise risk and Portfolio Risk of Loan and advances - Fewa Finance Limited

All Figures are %

Assume that:

A	=	Hire Purchase		In where			
				W	=	Weight	
B	=	Housing Loan		$\exists$	X	Standard deviation	
C	=	Term Loan		$\dagger^2$	=	Variance	
D	=	Fixed Loan		$\exists_p$	=	Portfolio standard deviation	
R	=	Return					

Step 1: Calculation of Expected Return

FY	R_A	R_B	R_C	R_D
061/62	11.33	11.59	9.46	8.01
062/63	9.72	10.19	9.74	4.50
063/64	9.53	10.89	9.75	4.83
064/65	9.31	10.93	10.02	10.83
065/66	10.27	8.35	11.36	13.07
Exp. Return (R)	10.03	10.39	10.07	8.25

Step 2: Return minus Expected Return

FY	$R_A - \overline{R_A}$	$R_B - \overline{R_B}$	$R_C - \overline{R_C}$	$R_D - \overline{R_D}$
061/62	1.30	1.20	-0.60	-0.23
062/63	-0.31	-0.20	-0.32	-3.74
063/64	-0.51	0.50	-0.32	-3.42
064/65	-0.72	0.54	-0.04	2.58
065/66	0.24	-2.04	1.29	4.82

Step 3: Calculation of Variance and Standard deviation

FY	$(R_A - \overline{R_A})^2$	$(R_B - \overline{R_B})^2$	$(R_C - \overline{R_C})^2$	$(R_D - \overline{R_D})^2$
061/62	1.68	1.43	0.36	0.05
062/63	0.10	0.04	0.11	14.01
063/64	0.26	0.25	0.10	11.71
064/65	0.52	0.29	0.00	6.65
065/66	0.06	4.16	1.67	23.23
Total	2.61	6.18	2.24	55.66
$\dagger^2$	0.52	1.24	0.45	11.13
$\dagger$	0.72	1.11	0.67	3.34

Step 4: Calculation of Covariance, Multiplied covariance by 2 and concerned sector's weight

FY	$(R_A - \overline{R_A})(R_B - \overline{R_B})$ A x B	$(R_A - \overline{R_A})(R_C - \overline{R_C})$ A x C	$(R_A - \overline{R_A})(R_D - \overline{R_D})$ A x D	$(R_B - \overline{R_B})(R_C - \overline{R_C})$ B x C	$(R_B - \overline{R_B})(R_D - \overline{R_D})$ B x D	$(R_C - \overline{R_C})(R_D - \overline{R_D})$ C x D
061/62	1.55	-0.78	-0.30	-0.72	-0.28	0.14
062/63	0.06	0.10	1.15	0.07	0.76	1.21
063/64	-0.25	0.16	1.73	-0.16	-1.72	1.10
064/65	-0.39	0.03	-1.87	-0.02	1.40	-0.11
065/66	-0.49	0.31	1.16	-2.63	-9.83	6.22
Total	0.48	-0.18	1.87	-3.47	-9.66	8.56
COV	0.10	-0.04	0.37	-0.69	-1.93	1.71
Formula's '2'	2.00	2.00	2.00	2.00	2.00	2.00
W_A	0.23	0.23	0.23			
W_B	0.40			0.40	0.40	
W_C		0.36		0.36		0.36
W_D			0.01		0.01	0.01
2 x Wx COV	0.0172	-0.0058	0.0022	-0.2000	-0.0199	0.0162

Step 5: Mutiplication of variance and square of weight

	A	B	C	D	
W	0.23	0.40	0.36	0.01	
$\exists$	0.72	1.11	0.67	3.34	
W^2	0.05	0.16	0.13	0.00	
$\exists^\wedge$	0.52	1.24	0.45	11.13	
$W^2 \exists^2$	0.03	0.19	0.06	0.00	

Now, Putting the values in the forumla;

$$\dagger_p X \dot{W}^2\dagger^2_{AA} \Gamma W^2\dagger^2_{BB} \Gamma W^2\dagger^2_{CC} \Gamma W^2\dagger^2_{DD} \Gamma 2W W Cov(R,R)_{AB} \Gamma 2W W Cov(R,R)_{AC} \Gamma 2W W Cov(R,R)_{AD} \Gamma 2W W Cov(R,R)_{BC} \Gamma 2W W Cov(R,R)_{BD} \Gamma 2W W Cov(R,R)_{CD}$$

$$\dagger_p 11X \cdot 0.03 \Gamma 0.19 \Gamma 0.06 \Gamma 0.0022 \Gamma 0.0172 \Gamma (\cancel{Z}0.0058) \Gamma 0.0022 \Gamma (\cancel{Z}0.20) \Gamma (\cancel{Z}0.0199) \Gamma (0.0162)$$

$\exists_p = \sqrt{0.09}$

$\exists_p = 0.3027$

Appendix 12

Calculation of Correlation Coefficient

$$\text{We know that: } \rho_{AB} \; X \; \frac{Cov(R_A, R_B)}{\sigma_A \sigma_B}$$

Loan and Advances	OFL				FFL			
	$Cov(R_A, R_B)$	σ_A	σ_B	ρ_{AB}	$Cov(R_A, R_B)$	σ_A	σ_B	ρ_{AB}
Hire Purchase & Housing Loan	0.05	2.36	1.11	0.02	0.10	0.72	1.11	0.12
Hire Purchase & Term Loan	2.18	2.36	1.13	0.81	-0.04	0.72	0.67	-0.07
Hire Purchase & Fixed Loan	1.12	2.36	3.86	0.12	0.37	0.72	3.34	0.16
Housing Loan & Term Loan	-0.54	1.11	1.13	-0.43	-0.69	1.11	0.67	-0.93
Housing Loan & Fixed Loan	-0.06	1.11	3.86	-0.01	-1.93	1.11	3.34	-0.52
Term Loan & Fixed Loan	-1.06	1.13	3.86	-0.24	1.71	0.67	3.34	0.77

Appendix 13

Risk Free Rate

FY	T-bill rate
061/62	4.32
062/63	3.95
063/64	3.5
064/65	5.49
065/66	6.06
Total	23.32
Average Risk free rate ($\overline{R}_f$)	**4.664**

(Source : Monetary Policy for FY 2009/10; Table 16, NRB)

Appendix 14

Calculation of Market Risk and Return

FY	Nepse Index	Index Return	K_m (in %)	$R_m - \overline{R_m}$	$(R_m - \overline{R_m})^2$
060/61	222.04	-	-	-	-
061/62	286.67	64.63	29.11	-2.79	7.76
062/63	386.83	100.16	34.94	3.05	9.28
063/64	683.95	297.12	76.81	44.92	2017.41
064/65	963.36	279.41	40.85	8.96	80.26
065/66	749.10	-214.26	-22.24	-54.13	2930.52
Total	3291.95	527.06	159.47	0.00	5045.23

(Source : Annual report, NEPSE)

Mean Return of Market $Mean(\overline{R_m}) \times \dfrac{\sum K_m}{n} = \dfrac{\sum 159.47}{5} = 31.89\,\%$

Market Standard Deviation $\dagger_m \times \sqrt{\dfrac{\sum (R_m - \overline{R_m})^2}{n}} \quad \sqrt{\dfrac{5045.23}{5}} = 31.77\%$

Appendix 15

Calculation of Market Index Movement

FY	Nepse Index	Index movement
061/62	286.67	9%
062/63	386.83	13%
063/64	683.95	22%
064/65	963.36	31%
065/66	749.1	24%
Total	3069.91	100%

Appendix 16

Calculation of Sharpe's Portfolio Performance Measure

Sharpe Measurement	Return ($\overline{R}_P$)	Risk Free Rate ($\overline{R}_f$)	Portfolio S.D. ($\dagger_P$)	$S_P \times \dfrac{\overline{R}_j Z \overline{R}_f}{\dagger_j}$
OFL	10.44	4.664	0.70	8.1904
FFL	10.16	4.664	0.30	18.1665
Market	31.89	4.66	31.77	0.8572

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