CHAPTER-I

INTRODUCTION

1.1 Background of the study

The art of selecting the right investment policy for the individuals in terms of minimum risk and maximum return is the portfolio management. It simply means holding of securities and investment in financial asset i.e. bond, stock. Diversification of financial asset is done while in financial asset while building appropriate portfolio. The combination of investment assets is portfolio (Weston and Brigham, 1992). The investment portfolios generation the income and capital preservation, considering the risks stemming from other asset and liabilities and those associated with institutional activities (Rose, 2003). A portfolio simply represents the practice among the investor of having their funds in more than one asset. An investment can be defined as the commitment of funds to one or more assets that will be held over some future period. It often refers to investing money in financial assets, such as certificates of deposit, bonds, common stocks, or mutual funds (Jones et al., 2009).

Portfolio management is concerned with efficient management of portfolio investment in financial assets, including shares, debenture, and bonds of companies/industries. Every investment entails some degree of risk, it requires at present certain sacrifice for a future uncertain benefits (Francis, 1998). Portfolio management of financial institutions assets mean allocation of fund to different components of financial institution having different degree of risk and varying rate of return in such way the main goal of financial institution is maximize the return and minimize the risk by selecting a portfolio of securities. Portfolio investments track the jeopardy of abrupt snag if the economic environment or the perspicacity of depositors alter, providing upsurge to fiscal and pecuniary catastrophes (Kargi, 2014) and (Busse & Hefeker, 2005). The securities on the long end provide relatively high interest income, as well as potential for capital gains in the event of falling interest rates, while the securities on the short end provide liquid assets to meet various demands for cash from the portfolio for bank needs (Bradley et al., 1975). Stability of the monetary market and situation impact financiers' portfolio investment verdicts and eventually portfolio investment drifts (Masoud & AbuSabha, 2014).

This study sought to establish the effect of size on the relationship between corporate diversification and performance of commercial banks in Nepal. Specifically, the study sought to; determine the effect of corporate diversification on performance of commercial banks in Nepal and investigate the effect of performance on corporate diversification among commercial banks in Nepal. The findings of the study contribute to the pool of literature, which has over the years demonstrated that there exists a positive direct linear relationship between revenue diversification and financial performance. This study tries to decompose corporate diversification into interest income diversification, non-interest income diversification and branch diversification. On future research directions, there is a need to undertake a study on internal and external factors, which influence levels of diversification and financial performance among financial institutions across geographical locations, financial product lines and non-financial institutions while taking cognizance of the organizations' motives and ownership structures.

Banking institutions are in business to maximize investors' returns and profit. Because commercial banks act as intermediaries in the financial system, some studies in the sector are also underpinned by financial intermediation theory as proposed by Diamond (1984) which explains the role of banking systems as financial intermediaries. It must not invest its funds into speculative business man who may be bankrupt at once and who may earn millions in a minute. The bank should accept that type of securities which are commercial, durable, marketable stable, transferable and high market prices. A commercial bank can maximize its volume of wealth through maximization of return on their funds' investments and lending. So, they must invest their funds where they gain maximum profit. The profit of commercial banks mainly depends on the interest rate volume, tenure of loan and nature of investment in different securities while investing excess funds in different securities or at the bank in different securities. While investing excess funds in different securities or at the lending period, the banks should keep in mind that the people deposit money at the bank in different account with confidence that the bank will repay their money on demand. Similarly, a bank should not lay all its eggs on the same basket i.e., to minimize risk, a bank must diversify its investment on different sectors. Diversification of loan or investment helps to sustain loss according to the

law of average because if securities of a company deprived, there may be appreciation in the securities of other companies.

1.2 Problem Statement

Agency theory of Jensen & Meckling (1976) suggested that divorce of ownership and control in a firm often leads to conflict of interests between agents or managers and their principals who are shareholders of the organization. Bank managers, as agents, are involved in decisions on which loan products to invest in and the type of product innovations to undertake in order to maximize returns for their principals, the shareholders. Corporate diversification remains a central research topic with innumerable studies exploring its association with firm performance (Wernerfelt & Chatterjee, 1991, Palich, Cardinal and Miller, 2000). Flamini and McDonald (2009) illustrated that diversification explain performance levels variations. Ali, Haider Hashmi and Mehmood (2016) summarized that literature document mixed results on the relationships between diversification and performance as ranging from linear, U-shaped or inverted U-shaped relationships. Bhatia and Thakur (2018) for instance documented a strong bidirectional relation between performance and diversification. The diversification extent was directly interrelated with corporate profitability, thus an indication that well diversified companies experience a substantial diversification premium. Further, total diversification had a positive effect on performance, suggesting that high performance brings about greater diversification. Benito-Osorio, Guerras-Martín and Zúñiga-Vicente (2012), Palich et al. (2000), Park and Jang (2013), Zahavi and Lavie (2013) and Zhou (2011) clarified that the research stream examining the diversification, size and performance relationships cannot be described as mature due to lack of an empirically shaped consensus.

A bidirectional link exists between corporate diversification and company performance as presented by Bhatia and Thakur (2018). Lien and Li (2013) put forward that diversification is a commonly employed approach for developing a company's market share, leading to increased revenue and profitability. According to He (2012), good company performance allows the adoption of various diversification approaches. Erdorf, Hartmann-Wendels, Heinrichs and Matz (2013) and Shyu and Chen (2009) opined that a simultaneous correlation exists between diversification

strategies and corporate performance. These studies suggest that the level of diversification is endogenous to the company's profitability and similarly, enterprise performance is endogenous to the corporate diversification. Globally, Dimitrios and Mike (2016), Psillaki and Mamatzakis (2017) and Gololo (2018), observed that worldwide, the banking industry has encountered various difficulties which has led interest income destabilization. In particular, the industry continues to face growing problem loans, competition from non-banks and unprecedented financial technology growth. In response to these challenges, Mohamed and Bett (2018) and Ferrari, Masetti and Ren (2018) explaind that in the last three decades, banking institutions have extended their sources of revenue by undertaking non-interest revenue producing activities also called nontraditional activities, like shares brokerage as well as underwriting, to supplement the declining interest revenues. Flamini, Valentina, McDonald and Liliana (2009) and Slocombe (2017) illustrate that sub-Saharan Africa (SSA) banking entities make more profits compared to the others across the globe. Kiweu (2012) noted that higher levels of bank profitability are a concern for public furor though Ndungu and Muturi (2019) observed that over the years, in Kenya, diversification has been viewed as important in improving commercial banks financial performance. Teimet, Lishenga, Iraya and Ochieng (2020) posit that the Kenyan-banking sector has experienced numerous regulations that have affected diversification activities, financial performance and size of the corporations over the years.

Mazur and Zhang (2015) identified adverse implications of diversification on performance. Stulz (1990) illustrated that diversification exacerbates agency conflicts between small shareholders and corporate insiders. Saoussen and Dominique (2011) illustrated that diversification performance relationship is nonlinear with risk, and not significantly uniform across business lines and among banks. A strand of studies has examined the difference between related and unrelated diversification with no consensus. Christensen and Montgomery (1981), Palepu (1985), Rumelt (1974 and 1982) and Tanriverdi and Venkatraman (2005) argued that related diversification can improve performance. Markides and Williamson (1994) observed that unrelated diversification could compromise performance. Inferring from the contradictory findings globally and with some studies indicating a dual causality relationship

between corporate diversification and performance, it is deduced that empirical studies are yet to conclusively address the following research questions.

i. What is the portfolio investment managed by the commercial banks of Nepal?
ii. What is the performance of portfolio management of commercial banks of Nepal?
iii. How does the investment portfolio choices affect the performance of commercial banks of Nepal?

1.3 Objectives of the study

The main objective of the study is to examine the portfolio investment management of the commercial banks of Nepal. This study is focused on investment decisions of banks on portfolio. The specific objectives of the study are as given below:

i. To assess the existing situation of portfolio management of Nepalese commercial banks.
ii. To measure the performance of portfolio management of commercial banks of Nepal.
iii. To examine the effect of the investment portfolio choices in the performance of commercial banks of Nepal.

1.4 Rationale of the study

The commercial banking sector of Nepal is expanding day by day. This study can be helpful to the companies to overview their portfolio management and to formulate future strategies to do much better in their horizon. Not only to the sampled banks, this study could also be beneficial to the other banks in the population as well. Further, the concerned scholars, academics, investors, professionals may also be benefited from this study. This study helps to inform the decision makers about the importance of portfolio management for their further success. The findings and recommendations of this research help the investor in making proper investment decisions. It also helps the financial managers to make important strategic decision on the debt- equity mix of the company. Academically, it makes a value addition for the researchers as it would serve as base of further research on capital structure and its determinants of the life insurance companies.

In Nepal, there are very little amount of researches and studies to go through regarding portfolio management and its influence on firm's performance in case of commercial banking sector. It is important for the financial managers to make decisions regarding the investment or application or recruitment of the capital fund of or for the company as it determines the portfolio of the company.

The result of this study provides financial guidance to mangers, business consultants and investors with the necessary techniques of combining debt and equity and being able to maximize company performance. This study also fulfills the time period gap with previous studies of same aspect.

1.5 Limitations of the study

Every study is guided under certain limitation but the researcher has tried to include all the necessary information for the conduct of the study as far as possible. Following are some limitations under which this study has been conducted:

i. This study is fully based on secondary data.
ii. The time factor is the major limitation for this study has to be completed within a short span of time. The study has covered the data of past fiscal years from 2011/12 to 2020/21.
iii. The study only concerns portfolio management while doing the investment decision.

1.6 Organization of the study

The study has been organized into following different chapters:

Chapter I: Introduction

This chapter includes the background of the study, statement of problem, objectives of the study, significance of the study and limitation of the study.

Chapter II: Literature Review

This chapter introduces the conceptual framework, review of available literature and research gap.

Chapter III: Research Methodology

This chapter includes the research methodology; it deals with research design, population and sample, sources of data, data collection and processing procedure and data analysis tools.

Chapter IV: Results and Discussion

This chapter concerns with data presentation and analysis. This is the core part of the study. Collected data are presented in the tabular and other forms. Different statistical presentations are used for analysis the collected data by using different financial and statistical tools and techniques. It also includes findings and discussion.

Chapter V: Conclusion

It includes the summary of the study, conclusion and implications.

Besides, above chapters, this study consists of separate references and appendices for those materials and books, which were used in the process of preparing this thesis report.

CHAPTER II

LITERATURE REVIEW

Review of literature is the study of past research studies and relevant materials. It is an advancement of existing knowledge and in-depth study of subject matter. It starts with a search of a suitable topic and continues throughout the volumes of similar or related subjects. This is related to the present research adds new dimension to the study. It is an integral and mandatory process in research work. In this part, focus has been made on the conceptual framework and the review of literature that is relevant regarding to the portfolio management. In this regard, various books, journals and articles concerned to this topic have been reviewed. Review of literature is based on available literature in the field of research. Every possible effort has been made to grasp knowledge and information that is available from libraries helps to take adequate feedback to broaden the information to study.

2.1 Theoretical review

This chapter deals with the theoretical aspect of the topics on investment portfolio in more detail and comprehensive review of recent and relevant literature. For this study, basic academic course books, journals, articles, annual reports and some research paper related with this topic have been reviewed.

2.1.1 Concept of investment

Investment in any vehicle into which funds can be placed with the expectation that will preserve or increase in value and generated positive return (Gitman, 2000). An investment is the allocation of saving into a course of action that is expected to generate positive rate of return. It involves the sacrifice of current rupees for future rupees. The sacrifice takes place in the present and certain while the reward comes later and uncertain. Investment involves long-term commitment and waiting for a reward. It involves the commitment of resources that have been saved or put away from current consumption in the hope that some benefit will occur in future. Investment brings forth vision of profit, risk, speculation and wealth. They have briefly describes the categories and types of investment alternatives. They describes that the basic investment objectives, the expected rate of return, the expected risk, taxes, the investment horizon and investment strategies are the factors to be

considered in choosing among investment alternatives (Cheney and Moses, 1992). The investment process describes how an investor should go about making investment decisions. Investment decisions basically calls for deciding the types of securities to invest in, amount of funds to be invested and appropriate timing for investment. Klammer (1993) explained a five-step procedure for making these decisions, which forms the basis of investment process. That is;

1. Determining investment policy

2. Perform security analysis

3. Construct a portfolio

4. Revise the portfolio

5. Evaluate the performance

2.1.1.1 Investment Alternatives

In the market, a wide range of investment alternatives are available to an individual investor (Cheney and Moses, 1995). Traditionally, there are various investment alternatives like, common stocks, preferred stock and bank as financial assets. But with the increase in financial market concept and principles, a lot of other financial alternatives have mesh roomed. Commercial bankers, investment bankers and brokers provide the financial manager with detailed information on each of the forms of investment listed. The financial manager should keep up to date on these characteristics and follow the principle of making investment selections that maturities yields and risks appropriate to the firm.

Frank et al., (2013) suggested that there are various alternatives for investors as well as financial institutions. They are as follows;

1. Equity Securities

a) Common Stock

b) Preferred Stock

2. Debt Securities

a) Short term debt securities

i. Negotiable certificate of deposit

ii. Commercial paper

iii. Banker's acceptance

iv. Treasury bills

b) Intermediate and long-term debt securities

i. Treasury notes

ii. Treasury bonds

iii. Saving bonds

iv. Agency securities

v. Municipal securities

vi. Corporate bonds

3. Derivative Securities

a) Options

b) Commodity future

c) Financial future

d) Options on future

e) Rights

f) Warrants

4. Hybrid Securities

a) Convertible preferred

b) Convertible bonds

5. Real Assets

a) Precious metals

b) Real estate

c) Collectibles

6. International Investment

a) Multinational corporations

b) Foreign stocks traded on a local exchange

c) American depository Receipts

7. Other Investment alternatives

a) Pension funds

b) Mutual funds

c) Closed end companies

2.1.1.2 Risk and Return

A major purpose of investment is to get a return or income on the funds invested. Each asset expected return and risk, along with the expected return and risk for other assets and their inter relationships are important input in portfolio selection. In order to construct efficient portfolio the investor most be able to quantity the portfolio's expected return and risk (Campbell, 1996)**.**

Risk

Risk and uncertainty are real in life. Everyone encounters uncertainty in every day's life. Risk and uncertainty are an integral part of an investment decision. Risk can be defined as a situation where the possible consequence of the decision that is to be taken is known. "Uncertainty" is generally defined to apply to situation where the probabilities can't be estimated (Cheney and Mosses, 1992).

Risk is uncertainty of whether the money investors lend will be returned. They have regarded such risk as bankruptcy risk. They said that stockholders of the firm should not only consider bankruptcy risk but also the risk that the firm will yield a rate of return below some targeted rate. They have given range, variance, standard deviation, coefficient of variation and beta as parameters for the measurement of risk. They describes beta as a parameter for the measurement of the systematic risk. Systematic risk has been defined undiversifiable risk, which is beyond the control of the organization. Apart from this they describe unsystematic risk, as diversifiable risk, which can be reduced through the portfolio effect. Further beta values for assets generally range between +0.5 and 2.0.

1) Systematic Risk

Systematic risk is that parts of total risk, which cannot eliminate. Systematic risk or undiversifiable risk is a function of its covariance with market portfolio of all assets divided by the variance of the market portfolio. The portions of the total risk of an individual security caused by market factors that simultaneously affect the price of all securities. It can't be diversified away. Systematic risk is the market risk. Which could not be avoidable it is also called market risk or unavoidable risk or non-diversifiable risk or beta risk (Mitchell & Pulvino, 2001).

The beta of the stocks is the slope of the characteristics line between return for the stock and those for the market. Beta depicts the sensitivity of the securities excess return to that of the market portfolio. This type of stock often called aggressive stock and slope less than 1 called defensive stock.

Thompson (1976) explained the factors by which the un-diversifiable risk is caused, which systematically affect all firms such as:

- War
- Inflation
- Recession
- Interest rate policy
- Corporate tax rate policy

Since all securities will tend to be negatively affected by these factors systematic risk cannot be eliminated by diversification therefore and investor will expect a compensation for bearing this risk.

ii**) Unsystematic risk**

The portion of the total risk that can be diversified away; it is also called non-market risk or avoidable risk or company-specific risk or diversifiable risk. Such unsystematic risk can be totally reduced through costless diversification. This risk is related at a decreasing rate towards zero as more randomly selected securities are added to the portfolio. Various studies suggest that 15-20 stocks selected randomly are sufficient to eliminate most of the unsystematic risk of portfolio (Van Horne, 2002). It is caused by events particular to the firm. Event such as labor strikes,

management errors, inventories, advertising companies, shift in consumer taste and law-suits cause unsystematic variability in the value of market assets. Since unsystematic changes affect one form, or at most few firms, they must be force casted separately for each firm and for each individual incident. Unsystematic security prices movement are statistically dependent from each other.

According to Bansal & Clelland (2004), sources of unsystematic risk are as follows:

- Labour strike
- Management errors
- Inventions
- Advertising companies
- Shifts in consumer taste
- Unsuccessful marketing programs
- The winning and losing of major contracts
- Other events and are unique to a particular firms

Since these events are essentially random, their effects on a portfolio can be eliminated by diversification i.e. bad events in one firm will be offset by good events in another.

Measurement of risk

1. Standard Deviation

Standard deviation is a statistical concept and is widely used to measure risk from holding a single assets. A high standard deviation represents a large dispersion of return and is a high risk a low deviation is a small dispersion and represents a low risk. It provides more information about the risk of the assets.

2.1.2 Portfolio management

Portfolio management is basically concerned with efficient management of portfolio investment in financial assets including shares and debentures of companies. Portfolio management assumes periodic supervision of the security in the portfolio. Portfolio of an individual or a corporate unit is the holding of securities and investment in financial assets which is the result of individual's preferences and decision regarding

risk and return. The process of portfolio management is directly linked with the process of decision making the correctness of which cannot be ensured in all cases. “Portfolio analysis is to develop a portfolio that has the maximum return at whatever level of risk the investor deems appropriate. A portfolio is a collection of investment securities.” (Weston & Brigham, 1992).

The portfolio management is the art of handling a pool of funds so that it only preserves its original worth but also overtime appreciates in value and yields an adequate return consistent with the level risk assumed. A logical set of steps are involved in the process of portfolio management which are commonly applied to any decision planning, implementation and monitoring. The basic problem of portfolio management is to establish an investment objective or goal and then decide the best to reach the goal with the available securities. “Portfolio theory deals with selection of optimal portfolios i.e., portfolios that provide the highest possible return for any specified degree of risk or the lowest possible risk for any specified rate of return.” (Weston & Copeland, 2003).

2.1.3 Investment portfolio

A portfolio is usually defined as a combination of assets. It is a collection of securities. Portfolio means the lists of holding in securities owned by an investor or institution. A portfolio is a collection of investment securities. Example, if you hold some stocks of Nepal Investment Bank Ltd., some of Bottlers Nepal Co., some of Radisson Hotel and some of Standard Chartered Bank Ltd. Your investment portfolio consists of the stocks of these four different companies. Portfolio analysis considers the determination of future risk; and return is a weighted average of the expected return of the individual securities. Portfolio theory deals with the selection of optimal portfolio i.e., the portfolio that provides the highest possible return for any specified degree of risk or the lowest possible risk for any specified rate of return. Portfolio theory has been developed for the financial assets. Thus, making investment from the selected optimal portfolio i.e., the portfolio that provides the highest rate of return with least possible amount of risk is the real investment portfolio. “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.” (Weston & Brigham, 1992)

An investor who has been paying someone or actively manages his or her portfolio has every right to insist on knowing what sort of performance was obtained. Such information can be used to alter either the constraint placed on the manager, the investment objective given to the manager, to the amount of money allocated to manager. Perhaps more importantly, by evaluating performance in specified ways a client can forcefully communicate his\ her interest to the investment manager and in all likelihood, affect the way in which his or her portfolio is managed in the future. Moreover, an investment manager, by evaluating his or her own performance, can identify sources of strengths or weakness.

2.1.4 Investment alternatives

In the market, a wide range of investment alternatives are available to an individual investor. Investment alternatives may be classified as financial asset alternatives and real asset alternatives. Common stocks, preferred stocks, bonds, convertible, warrants, options, rights, futures etc. are examples of financial asset alternatives. Real estates, precious metals, and collectibles are examples of real asset alternatives. Given the various investment alternatives, every investor has a target to increase gain form investment in kinds of securities depending on their perception and choice of the particular securities. (Cheney and Moses, 1995)

2.1.5 Portfolio analysis and diversification

Investment risk can be reduced by including more than one alternative or categories of assets in the portfolio and by including more than one asset from each category. Hence, diversification is essential to the creation of an efficient investment because it can reduce the variability of returns around the expected return. “This diversification may significantly reduce risk without a corresponding reduction in the expected rate of return on the portfolio.” (Weston and Copeland, 2003). "Investment positions are undertaken with the goal of earning some expected rate of return. Diversification is essential to the creation of an efficient because it can reduce the variability of returns around the expected return.” (Francis, 2006) Diversification is the one important means that control portfolio risk. Investments are made in a wide variety of assets so that exposure to the risk of any particular securities is limited. By placing one’s eggs in many baskets, overall portfolio risk actually may be less than the risk of any component security considered in isolation.

Diversification is an attempt to reduce investment risk by investing among various financial instruments and industries. Most investment professionals agree that, although it does not guarantee against loss. Diversification is the most important step to reaching your long-range financial goals minimizing risk. The common saying "Don't put all your eggs in one basket" is the essence of the principle of diversification. Because all investments carry with them some level of risk, it is important to diversify and spread your money into many different investments.

Since diversification helps to reduce portfolio risk by eliminating unsystematic risk, investor did not compensate for bearing such risk, it happens due to un-professionalism and internal problems. Investor will be rewarded only for taking market risk which is also known as unavoidable risk and systematic risk. Diversification in the investment or making portfolio in security level or in industry level protect against volatility and uncertainty at rate of return. By choosing securities of different companies in different industries, we can minimize the risks associated with a particular company's "bad luck".

2.1.5.1 Portfolio risk and return

Each asset’s expected return and risk along with the expected return and risk for other assets and their interrelationships are important inputs in portfolio selection. In order to construct efficient portfolios, the investor must be able to quantify the portfolios expected return and risk. (Cheney & Mosses, 1995)

From an investor’s standpoint the fact that a particular stock goes up or down is not very important. What is important is the return on his /her portfolio, and the portfolio’s risk. Logically, then the risk and return characteristics of an investment should not be evaluated in isolation: rather, the risk and return of an individual security should be analyzed in terms of how the security affects the risk and return of the portfolio in which

it is held.

Portfolio return

The expected return of a portfolio is the weighted average of the expected returns of the individual assets in the portfolio. The weights are the proportions of the investor’s wealth invested in each asset and the sum of the weight must equal to one. (Cheney &

Mosses, 1995). The expected return on portfolio depends upon the amount of funds invested in each security; given expected return on the individual securities.

Portfolio risk

The calculation of a portfolio risk is not as straight forward as the calculation of a portfolio's expected return. In order to calculate the risk of a portfolio, consideration must be given not only to the risk of the individual assets in the portfolio and their relative weights but also to the extent to which the assets' returns move together. We measure the risk of an individual asset by the variance of returns or its square root, the standard deviation. The degree to which the assets' return move together is measured by the covariance or correlation coefficient. By combining the measures of individual asset risk (variance or standard deviation), relative asset weights, and the co-movement asset's return (covariance or correlation), the risk of the portfolio can be estimated. Total risk is measured by either the variance or its square root, the standard deviation of returns. (Cheney & Mosses, 1995).

2.1.6 Financial performance

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. The term is also used as a general measure of a firm's overall financial health over a given period. No single measure should be used to define the financial performance of the firm. Financial performance can be measured by the ROA, ROE, ROI, return on capital employed, profit margin, current ratio etc. In this study, ROA and ROE are used to measure the financial performance.

2.2 Empirical Review

2.2.1 International context

Nanda, Mahanty and Tiwari (2010) investigated a data mining approach for classification of stocks into cluster is presented. After classification, the stocks should be selected from these groups for building a portfolio. It meets the criterion of minimizing the risk by diversification of a portfolio. The clustering approach categorizes stocks on certain investment criteria. They have used stock returns at different times along with their valuation ratios from the stocks of Bombay Stock Exchange for the fiscal year 2007-2008. Results of this analysis show that K-means cluster analysis builds the most compact clusters as compared to SOM and Fuzzy c-

means for stock classification data. Then they select from the clusters to build a portfolio, minimizing portfolio risk and compare the returns with that of the benchmark index.

Senthilnathan (2016) suggested that in investment, particularly in the portfolio management, the risk and returns are two crucial measures in making investment decisions. It attempted to provide a brief theoretical explanation with illustrations on determining the returns and associated risk of shares, and of the portfolio of the shares. The illustration of tables and figures can significantly contribute to the understanding of a reader in relation to portfolio management of risk and returns. The illustrative table and figures are the significance of this paper and it is believed that the reader of this paper would gain reasonable knowledge in portfolio management.

Orabi (2017) studied how investors select investments that will give them their required rate of return: they are mainly concerned with the performance alternatives. This study is mainly concerned with the performance of Jordanian Banks in their alternative investments in general and portfolio investment in particular. Study results revealed that banks of Jordan adhere to theories of formation of investment portfolios, in terms of diversification, trade-off between return and risk, and policy in the composition of the portfolios. The principle of convenience is applied to ensure the stability of the investor and the capital return. Study also pointed out that banks of Jordan adhere to the principle of diversification, and are committed to the principle of trade-off between risk and return and comply with the principles of the policy in the composition of the portfolio, and the principle of ensuring the stability of the investor and the capital return.

Oliinyk and Kozmenko (2019) considered the task of creating an investment portfolio by a financial institution. Funds for creating a portfolio are taken from two sources: enterprises equity funds and borrowed funds. Optimization of the created portfolio is performed. A portfolio of maximum efficiency was obtained with restriction on the measure of risk, which is specified in the form of a VaR indicator. Using the optimization portfolio data, a model of portfolio asset management is being built. Using the Pontryagin maximum principle, optimal strategies of its participants are determined. The optimal function of managing the investment portfolio in the form of a share of the income received is found. Numerical results of optimal management of

investments in a financial portfolio from the financial institution as well as from the creditor are presented.

Pasini (2017) applied the method of Principal Component Analysis to three subgroups of stocks of the American Index Down Jones Industrial (DJI) Average. While, the first and second group, are homogeneous, the third one contains heterogeneous stocks. Cumulative Variance and Kaiser's Rule are used to get the principal risk directions. The obtained results show how to optimize portfolios investments to derive the best returns and financial control.

Danesh, Ryan and Abbasi (2018) suggested project portfolio management (PPM) has become a key element of large organizations' service delivery due to the close attention inherently paid to numerous issues in the discipline of project management. Its success is closely associated with the degree of understanding of its issues and the quality of decisions made at the portfolio level which can be addressed using multi-criteria decision making (MCDM) methods. Although several of these MCDM methods have been introduced to support decision-making functions as part of PPM, there has been little assessment of their performances, particularly when combining some of them. This paper identifies the key challenges of PPM, proposes a new framework for classifying PPM MCDM related methods and present a literature review of applications of MCDM methods to PPM.

Mallick (2019) examined bank portfolio management under banking regulation and asymmetric information about borrower types and screening by banks and imperfect competition in the credit market. A bank tries to maximize expected profits subject to a portfolio variance constraint. The analysis yields the following results: For a monopoly bank, the incentive constraint of the efficient type of borrowers will be binding and the participation constraint of the inefficient type of borrowers will be binding. Further, given the variance constraint being binding, the optimal portfolio will be on the efficiency frontier. The paper also examines duopoly; the optimal portfolio will be on the efficiency frontier. The paper also examines duopoly competition between aggressive (predator) and defensive (prey) banks and potential cooperation and reveals that among the alternatives of natural monopoly, entry deterrence, takeovers and efficient portfolio diversification through mergers or interest swaps, the cooperative efficient portfolio diversification strategy will dominate whenever portfolio returns are negatively correlated between any pair of

interesting banks as it reduces portfolio variance for a given package of interest and loans i.e. Sensex.

Platanakis and Urquhart (2019) contributed to the literature on crypto currencies, portfolio management and estimation risk by comparing the performance of native diversification, Markowitz diversification and the advanced Black-Litterman model with VBCs that controls for estimation errors in a portfolio of crypto currencies. They showed that the advanced Black-Litterman model with VBCs yields superior out-of-sample risk-adjusted returns as well as lower risks. Their results are robust to inclusion of transaction costs and short-selling, indicating that sophisticated portfolio techniques that control for estimation errors are preferred when managing crypto currency portfolios.

Badran (2020) analyzed the investment portfolio in banks and how to manage, study and analysis on the Iraqi banks period 2010-2018 to show the impact of the efficiency of the management of investment portfolio on the profitability of commercial banks listed on the Iraqi Stock Exchange. The study was conducted on all Iraqi commercial banks listed in the Iraqi Financial market, where the researcher first calculated the 2012 index and risk of the investment portfolio and return of the investment portfolio, the banks, which represent the independent variable, the return on investment and return on equity, and the risk-free return as control and subsidiary variables. A financial analysis aimed at identifying the effect of the efficiency of the management of the investment portfolio on the profitability of commercial banks. The results of the analysis were identical with the results of the statistical analysis, which was performed using the simple regression equation and multiple regressions to identify the effect and correlation coefficient Pearson to identify the relationship between the independent variable and the dependent variable. The main results of the study were the absence of statistically significant impact on the level of risk-free return on the return on investment and the return on equity and the absence of statically significant impact at the same level of return on the investment portfolio on both the return on investment and the return on equity and the existence of a statistical impact at the same time Wei risk investment portfolio on both return on investment and return on equity.

Yakubov and Meliboev (2020) discussed the functions of commercial banks as financial intermediaries, theoretical approaches to the "investment activity of

commercial banks" and the priorities of increasing the investment activities of commercial banks at the macroeconomic and microeconomic level are presented. The main directions of the participation of commercial banks in the investment process were identified and recommendations were given for the subsequent successful development of the investment activities of commercial banks.

Kumakov (2020) stated that for a stable and sustainable functioning of the bank, both in the short and long term, the formation of the investment strategy of a commercial bank requires a certain method of solving practical issues created in modern competitive and market conditions. A commercial bank from the position of investment activity carries out its activities with a high share of risk in the financial markets. To assess the bank's portfolio, a methodological plan has been drawn up and criteria for the effectiveness of the bank's investment portfolio have been defined.

Agblobi, Kuhorfah and Asamoah (2020) concluded that the banks optimally invest to earn profit as they consider the associated risks with such portfolio management. Portfolio management is a medium by which the banks hold investment due from other banks, purchase Government securities and invest in subsidiaries. This paper investigates the effect of banks' portfolio management on profitability. Five commercial banks that are listed on the Ghana Stock Exchange were randomly selected for the study. Data on the total market value of Government securities, investment in subsidiaries and due from other banks were collected from the Bank of Ghana and the Ghana Stock Exchange between 2008 and 2017. As panel study, we regress portfolio management on profitability. The findings show that holding of government securities and investing in subsidiaries have a significant positive effect on the profitability of the banks in Ghana. The findings also show that non-performing loans have a significant negative effect on the profitability of the banks. Therefore, it is recommended that banks should develop a balance between holding government securities and investing in subsidiaries to improve upon its profitability. The banks should also double their efforts to reduce their non-performing loans by enhancing the skills of its officers, strengthening its due diligence procedures and intensify monitoring activities.

Mohammed (2021) provided and applied the concept and techniques of multi-criteria decision-making under fuzzy environment in the prioritization and selection of projects in a portfolio management. In this study, the preference weights of the

criteria were identified using fuzzy AHP. Then, the weights are embraced in fuzzy TOPSIS to improve the gaps of projects (alternatives) to achieve the organization objectives as well as interactions between projects. Twenty Iraqi Oil Company projects were evaluated against five key criteria. The results showed that in fuzzy TOPSIS technique the measurement of criteria weights is important and they could adjust the ranking for other projects as well as figure out the best project to achieve the desired levels. This research as expected will serve as a helpful tool for stakeholders in improving the quality level of portfolio management projects.

2.2.2 National context

Paudel and Koirala (2006) tested whether or not Markowitz and Sharpe models of portfolio selection offer better investment alternatives to Nepalese investors. It had been done by applying those models in a sample of 30 stocks traded in Nepalese stock market. The study found that the application of these elementary models developed about a half century ago offer better options for making decision in the choice of optimal portfolios in Nepalese stock market.

Parajuli (2011) studied the bull-run in stock market has stimulated portfolio management services offered by merchant bankers. Anyone who wants to cash in on the ups and downs of the share market but does not have the expertise or time to invest in stock trading can obtain the services of a portfolio management company. Portfolio managers purchase and sell securities on behalf of their clients and manage their investment portfolio. “The number of clients with us has increased as professionals who do not have the time to devote in investment but want to make money from the capital market have recognized the usefulness of having a professional manage their portfolio,” pointed out chief executive of Nabil Investment Pravin Raman Parajuli. Nabil Investment offers portfolio management services. Among the 14 merchant bankers licensed by SEBON, 11 have been granted license to operate as portfolio managers. Among them, only three are involved in providing portfolio management services. NABIL Investment, Beed Invest and Vibor Capital are the only merchant bankers that are managing the funds of their clients. Beed Invest had started its portfolio management service in 2009.

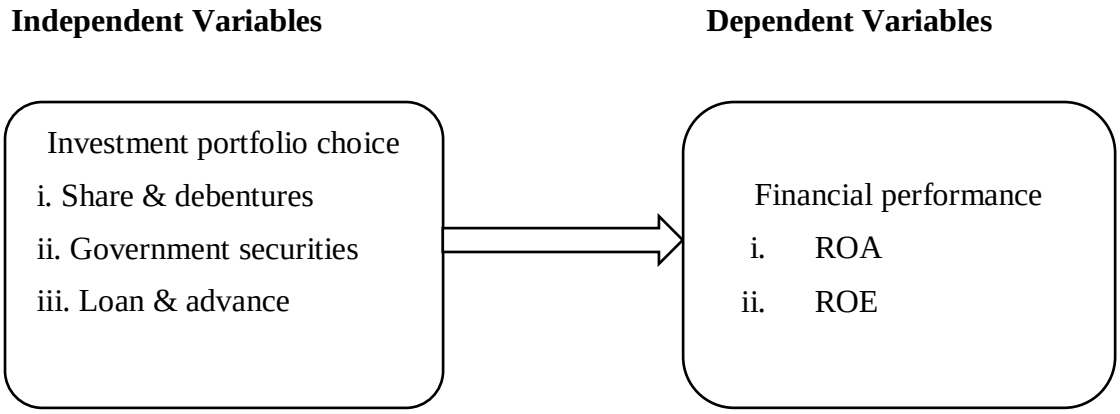
Shrestha (2013) concluded that investment as utilization of saving for something that is expected to produce profit or benefits. Investment is employment of funds with the

aim of achieving addition income or growth in value. It involves the commitment of resources that have been saved or put away from current consumption, in the hope that some benefits will acquire in the future. Investment generally involves real assets and financial assets. Real assets investment involves some kinds of tangible assets such as building, land, machinery and factory etc. and financial assets investment are pieces of paper representing an indirect claim to real assets held by someone else. Real assets are generally less liquid than financial assets.

2.3 Research gap

The review of relevant literature, has contributed to enhance the fundamental understanding and knowledge. This is required to make this study meaningful and purposeful. There have been lots of article published related to investment portfolio management. Most of the researcher has done research on investment portfolio. However, they are mainly concerned with the rate of the return but they don't measure the relationship between investment and other variables. Hence, this study will find out the real relationship between the investment with deposits, profitability, loan, and advance. Further, previous studies covered the data till FY 2020/21 hence there is gap in terms of time period in the research area and this study is designed to fulfill the gap created in terms of time period as well.

2.4 Conceptual framework



Source: Impact of investment portfolio choice on financial performance of investment companies in Kenya (Kamwaro, 2013).

Figure 2.1: Conceptual Framework

Share and debentures

According to Nirajini & Priya (2013), the capital a company raised by offering shares is known as equity share capital or share capital. It is the money that company owners and investors direct towards a company's capital and use to develop or expand the operations of their venture. A debenture is a marketable security (a type of investment) issued by a business or other organization to raise money for long-term activities and growth. It is a form of debt capital so it is accounted for as debt on the balance sheet of the issuing company (Brigham, 1996). However, too much debt can increase the risk of the company and reduce its financial flexibility, which at some point creates concern among investors and results in a greater cost of capital. Company management is responsible for establishing a capital structure for the corporation that makes optimal use of financial leverage and holds the cost of capital as low as possible.

Government securities

Government securities are issued to raise capital in the market. The main source of internal debt is government bonds. Government takes loan from its own people as well as financial institutions to fulfill the budgetary deficit and others purpose, this type of loan is called internal debt. Investment in government securities is more secured as compared to other investments, however organizations should also maintain balance between government and private investment to in cash more return from the investment (Kumar & Okimoto, 2011).

Loan and advance

A loan can be defined as a monetary amount that is offered by financial organizations for a specific period. On the other hand, advances are provided by banking institutions to companies business organizations. The quantum of loans is the single most important differentiating factor which influences the financial capability of both individuals and companies. The quantum of loans in personal advances depends on the income streams of the borrower on a monthly or a periodical basis. In the case of companies, the method of selecting the loan quantum is a tad complex. The financial statements of the cash projections are taken into account to form an objective viewpoint of the present and future profitability of the company (Birhanu et al., 2021).

ROA

The term return on assets (ROA) refers to a financial ratio that indicates how profitable a company is in relation to its total assets. Corporate management, analysts, and investors can use ROA to determine how efficiently a company uses its assets to generate a profit. The metric is commonly expressed as a percentage by using a company's net income and its average assets. A higher ROA means a company is more efficient and productive at managing its balance sheet to generate profits while a lower ROA indicates there is room for improvement (Jewell & Mankin, 2011).

ROE

According to Arditti (1967) Return on equity (ROE) is a measure of financial performance calculated by dividing net income by shareholders' equity. Because shareholders' equity is equal to a company’s assets minus its debt, ROE is considered the return on net assets. ROE is considered a gauge of a corporation's profitability.

CHAPTER III

RESEARCH METHODOLOGY

Research methodology is the systematic and theoretical analysis of the methods applied for the study. It is a basic framework and blueprint of overall study. It is necessary to determine and describe the research methodology before analyzing and interpretation of the data. The study will be useless in absence of the research design because without the research design there will not be any framework, guideline and methods to carry out the research study. Research methodology helps to find out the accuracy, validity and suitability of the study.

This chapter therefore explains the methodology employed in this study. This chapter has been divided into five sections. Section one provides a description of research design used in this study. Section two describes the population and sample along with the selection of enterprise for the purpose of study. Third section deals with the nature and source of data. Similarly, section four describes data collection procedure. Section five explains the data analysis tools and techniques, method of analysis including the empirical models variables and their measurement criteria.

3.1 Research design

The primary objective of this study is to analyze the portfolio investment management of the commercial banks of Nepal. A researcher has collected the valuable data and suitable information relating to portfolio investment to achieve the objectives. This study is mainly based on descriptive and analytical research design.

3.2 Population and sample

Under the study of portfolio management of Nepalese commercial banks, the total number of commercial banks operating in Nepal was the population. At present, there are 27 commercial banks are operating in Nepal. All 27 commercial banks have been considered as the total population of the study. Out of them this study is concerned with three commercial banks as a sample. As Kothari (2004) recommends, a sample of 10% to 30% of the target population is a sufficient representation of the population. In line with this, the selected sample banks for the study are as follows:

i. Everest Bank Ltd. (EBL)
ii. Nepal Investment Bank Ltd. (NIBL)

iii. NMB Bank Ltd. (NMB)

3.3 Nature and sources of data

The secondary data has been used to achieve the main theme of the study. The main sources of the secondary are annual reports of the sample commercial banks. The major sources of secondary data are as follows:

i. NRB reports from 2011/12 to 2020/21
ii. Banking and Financial Statistics from 2011/12 to 2020/21
iii. Annual reports of sample banks from 2011/12 to 2020/21

3.4 Data collection and processing procedure

Essential financial data have been collected from different websites of the banks. Data used for the study has been collected through annual reports, NRB reports etc. The collected data has been processed as per the need of the study. These data have been grouped in different tables and figures according to their nature.

3.5 Data analysis tools and techniques

Data analysis is a process of inspecting, cleansing, transforming and modeling data with the goal of discovering useful information, information conclusion and supporting decision making. To get the solution of the objectives which are set in chapter one appropriate statically and financial tool are employed. In this study, data has been analyzed using the various statistical tools such as mean, standard deviation, coefficient of variation, regression analysis and various financial tools such as ROI, ROA, ROE, etc.

3.5.1 Statistical tools

Various statistical tools can be used to analyze the data available to the researcher. These tools are used in research in order to draw the reliable conclusion through the analysis of financial data. Following statistical tools are used in this study.

Average rate of return

Average rate of return is the arithmetic average of the historical returns forecasted for next period. It is obtained by dividing the sum of total of the return by the number of the observation.

Standard deviation

Standard deviation (S.D) is defined as the positive square root of the mean of the deviations taken from the arithmetic mean. It is denoted byσ. It is said to be the best measure of the dispersion as it satisfies most of the requisites of a good measure of dispersion. Standard deviation is an estimate of the likely divergence of an actual return from an expected return. It measures the risk of the return. The higher the standard deviation, more risk will be in the assets.

Risk on individual assets or standard deviation for assets can be calculated using historical returns with this equation:

$$\text{Standard Deviation } (\sigma) = \sqrt{\frac{\sum(R - \bar{R})^2}{n}}$$

Where,

R= Rate of return on individual assets

$\bar{R}$= Average rate of return on individual assets

n= Number of observations

Coefficient of variation

Co-efficient of variation is the standardization measure of risk per unit of return. It is calculated as the standard deviation divided by the expected rate of return. It provides a more meaningful basis for comparison when two investments of different expected return and standard deviation are to be compared. It is calculated by the following equation.

It is calculated by the following equation:

$$\text{Coefficient of Variation} = \frac{\sigma}{\bar{\bar{R}}}$$

Where,

σ = Standard deviation

$\bar{\bar{R}}$ = Average rate of return

Correlation of coefficient

The correlation between the different variables of a bank is compared to measure the performance of these banks. Correlation refers to the degree of relationship between

two variables. If between two variables, increase or decrease in one cause increase or decrease in another, then such variables are correlated variables. The reliability of the value of coefficient of correlation is measured by probable error. The correlation coefficient describes the degree of relationship between two variables. It interprets whether variables are correlated positively or negatively. This tool analyses the relationship between those variables by which it is helpful to make appropriate investment policy for profit minimization.

Correlation coefficient between two assets is also calculated by using following formula:

$$\text{Correlation coefficient (r)} = \frac{\text{COV}_{AB}}{\sigma_A \sigma_B}$$

Where,

COV_{AB} = Covariance between return from assets A and B

σ_A = Standard deviation of return from asset A

σ_B = Standard deviation of return from asset B

Regression analysis

Regression analysis examines the strength of a relationship or estimating; however in this type of analysis, one variable is considered an outcome (or dependent variable) and the other variable is considered a predictor (or independent variable). It is perhaps the most widely applied data analysis techniques for prediction or estimates. As correlation only tells the direction and strength of relationship, and fail to fet the estimate. The study of regression is very useful in several types of analysis related to the study of the existence of any correlation between two variables. Regression can be calculated by using SPSS software.

The study used the multiple linear regression equation to establish the impact of investment portfolio choice on financial performance of commercial banks.

Model specification

The study used a regression to estimate the model with ROA and ROE as the dependent variable and investment portfolio choice as the independent variables.

The economic model used in the study is given as:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon i$.....(1)

Where, Y is the dependent variable, β_0 is constant β_1, β_2, β_3, β_4 are the coefficient of the explanatory variable (the determinant attributes), and εi is the error term assumed to have zero mean and independent across time period.

3.5.2 Financial tools

Financial tools basically help to analyze the financial strengths and weaknesses of a firm.

3.5.1.1 Financial ratios

Ratio analysis is one of the important tools that have been used in the study. A ratio is relation between two or more variables. It expresses the quantitative relationship between any two numbers. Ratio can be expressed in terms of percentage, proportion and as coefficient. Financial ratio is the mathematical relationship between two accounting figures. Even though there are many ratios to analyze and interpret the financial statement, only those ratios that are many related to the investment operation of the bank have been used to complete this research.

Return on investment ratio (ROI)

Return on investment ratio shows how efficiently the organization is investing it funds in different sector for generating profit. The higher ratio the better the organization profit. The ROI ratio measures how efficiently the organization can earn on its investment. It is a kind of technique that measures the profitability position of the organization.

Return on assets (ROA)

This ratio measures the overall profitability of total assets. It is calculated by dividing net profit/loss by total assets.

Return on equity (ROE)

Net worth refers to the owner's claim of a bank. The excess amount of total assets over total liabilities is known as net worth. This ratio measures how efficiently the bank has used funds of the shareholders. This ratio can be computed by dividing net profit by total equity capital (net worth).

Risk and return on individual investment assets and investment portfolio

Return on share and debenture

The return on shares and debenture considers dividend yield and capital gain yield i.e. change in market price.

Return on government securities

The return on government securities is calculated by dividing interest earned from government securities by total investment on government securities.

Return on loan and advance

The return on loan and advance is calculated by dividing interest earned from loan and advance by total amount of loan and advance.

Average rate of return

When historical returns are used.

Risk on individual assets

Risk is defined as the variability of the return of a period. The one period rate of return is the basic random variable used in measuring an investment's risk. One such nature of risk is the standard deviation. Standard deviation is defined as the positive square root to the mean of the square of the deviation taken from arithmetic mean.

Risk on individual assets or standard deviation for assets can be calculated using historical returns with this equation:

Return on portfolio

The return on portfolio is simply the weighted average of the expected returns on the individual assets in the portfolio with the weights being the fraction of the total portfolio investment in each asset.

Risk on portfolio

Expected risk on a portfolio is a function of the proportions invested in the components, the riskiness of the components and correlation of returns on the component securities.

CHAPTER IV

RESULTS AND DISCUSSION

The presentation of data is the basic organization and classification of the data for analysis. The main theme of this chapter is to analyze and interpret the data by using financial and statistical tools. In this chapter, the concern is given in the presentation and analysis part of data in detail. As data presentation and analysis is the crucial part of any research, the purpose is to organize the collected data so that it can be used for interpretation whereas analysis of the data is to convert it from a crude form to an easy and understandable presentation. It is so obvious that the presentation of the data and its analysis help us to draw valid conclusion. There are a number of methods which can be used to simplify the data. It is being felt that the easiest way to understand the data is by examining it through tables and graphs.

4.1 Data presentation and analysis

4.1.1 Existing situation of portfolio management of Nepalese commercial banks

The portfolio management of the Nepalese banking sector has been improved remarkably during last 10 years due to the strict regulation of Nepal Rastra Bank. This study describes the present portfolio management practice of Nepalese commercial banks by using qualitative and quantitative methods. In this study, concentration of banks for portfolio management has been studied by analyzing investment on government securities, investment and loans and advances and investment in shares and debentures where the researcher has found assorted outcomes. Existing situation of portfolio management of Nepalese commercial banks has been described as below:

4.1.1.1 Investment portfolio analysis

Investment is a commitment of money and other resources that are expected to generate additional money and resources in future. In order to generate profit, banks also invest their resources certain sectors. Their major share of investment is in government securities, loan and advance and shares and debenture. Here, the researcher has attempted to analyze and compare the investment portfolio of sample banks on the basis of these three investment areas. The outcomes of the analysis have been presented in below table:

Table No. 4.1

Investment portfolio of commercial banks (in %)

F/Y	EBL			NIBL			NMB		
	G.S	L/A	S/D	G.S.	L/A	S/D	G.S	L/A	S/D
2011/12	13.60	86.08	0.31	9.42	90.43	0.14	16.80	82.09	1.11
2012/13	18.65	81.07	0.28	9.45	90.40	0.16	14.30	84.93	0.77
2013/14	14.42	85.32	0.26	12.86	86.78	0.36	15.03	84.05	0.91
2014/15	13.86	86.09	0.05	11.36	88.06	0.58	8.49	90.87	0.63
2015/16	5.07	94.80	0.13	10.01	89.40	0.59	9.36	90.16	0.48
2016/17	13.60	86.30	0.10	12.00	87.30	0.70	13.97	85.32	0.70
2017/18	13.22	86.68	0.10	10.21	89.22	0.56	7.32	92.23	0.45
2018/19	9.94	89.97	0.09	10.44	88.92	0.64	8.75	90.62	0.62
2019/20	14.07	85.90	0.03	11.41	87.99	0.61	9.57	89.77	0.66
2020/21	16.02	83.96	0.02	9.88	88.68	1.44	8.91	90.49	0.60
Average	**13.25**	**86.62**	**0.14**	**10.70**	**88.72**	**0.58**	**11.25**	**88.05**	**0.69**
Standard deviation	**3.61**	**3.63**	**0.11**	**1.15**	**1.21**	**0.36**	**3.38**	**3.56**	**0.20**
CV	**0.27**	**0.04**	**0.78**	**0.11**	**0.01**	**0.62**	**0.30**	**0.04**	**0.29**

Source: Appendices IV, V, VI and VII

Table 4.1 shows that the commercial banks have invested larger portion of funds on loan and advance and small portion on share and debentures. As per the table 4.1, CBs have invested more than 85% on loan and advance, more than 10% on government. Securities and less than 1% on share and debentures. The CV of loan and advance is lowest than others. It indicates that the investment on loan and advance is more consistent than that of other securities. CV of investment on government. securities is lower than that of share and debentures; it also shows investment is more consistent than share and debentures.

As we know coefficient of variation to help determine whether an investment's expected return is worth the volatility it is likely to experience over time.

The CV has been calculated as 0.36, 0.25 and 0.21 for EBL, NIBL and NMB respectively. Here the CV for the NMB is considered better since it creates more favorable tradeoff between risk and return.

The investment portfolio of commercial banks can be shown in following figures as well:

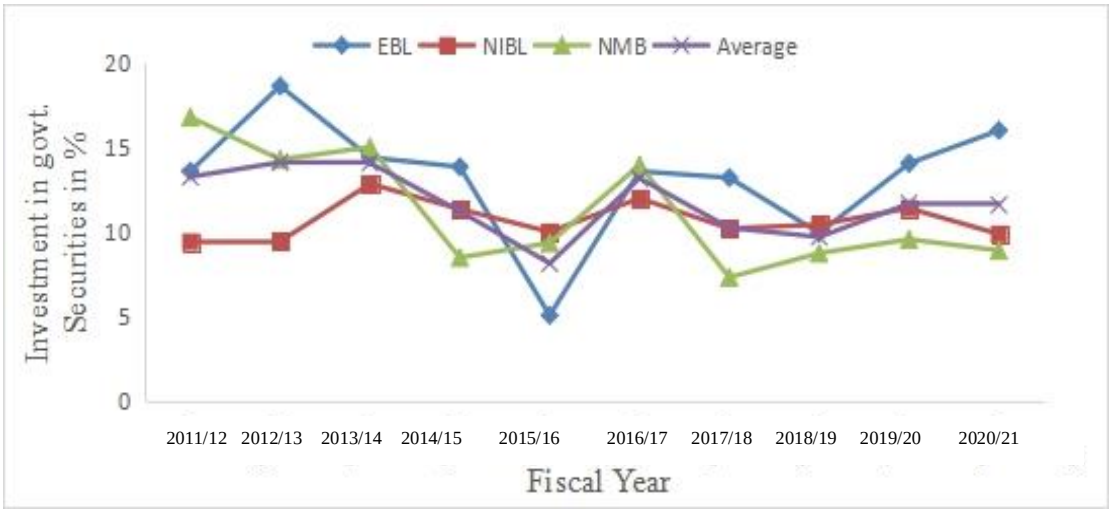


Figure 4.1 Investment in government securities of commercial banks(in %)

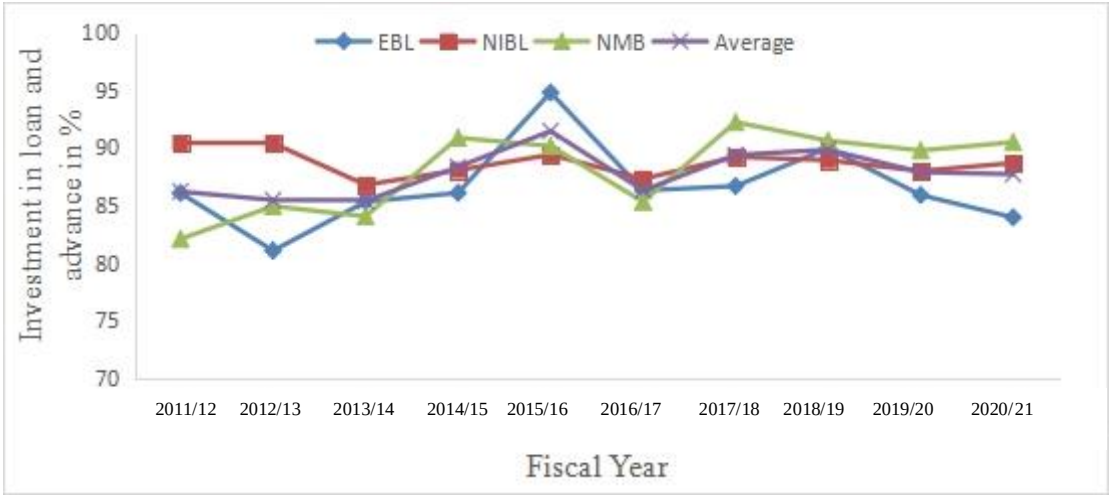


Figure 4.2 Investment in loans and advances of commercial banks (in %)

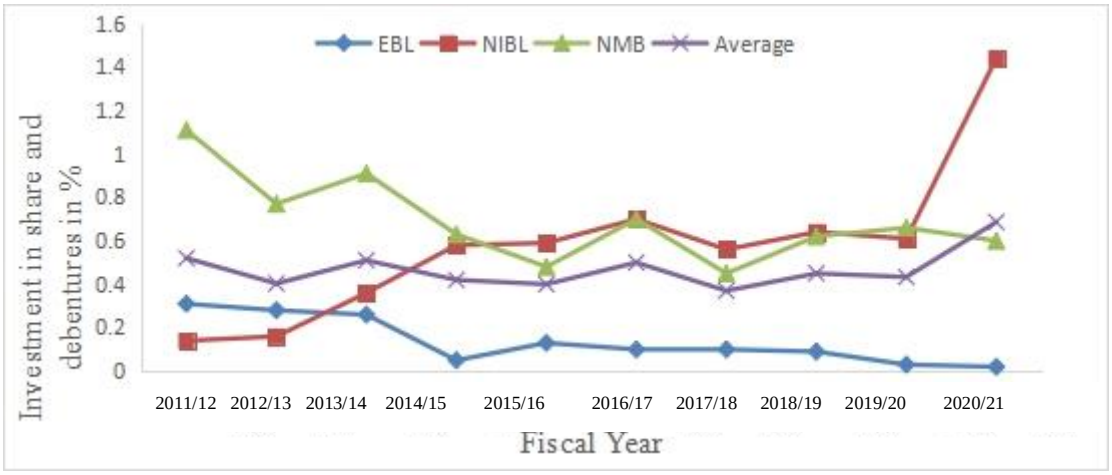


Figure 4.3: Investment in share and debentures of commercial banks(in %)

Figure 4.1 shows the investment on government. securities of CBs is in fluctuating trend. Similarly, figure 4.2 shows the investment trend on loan and advance of CBs is also in fluctuating. However, figure 4.3 shows that the investment on share and debenture is in decreasing trend because of the NRB directives i.e. the CBs are not allowed to invest in share and debentures more than 20% of their primary capital. In addition, the investing on share and debenture is not consistent than other. At the end, it can be concluded that CBs are mainly interested to invest on loan and advance, which gives high return. They are less interested to invest on share and debentures which also gives high return but they are bounded through the NRB compliances. Commercial banks have also invested on government securities more consistently which are less risk and low return.

4.1.2 Performance measurement of portfolio management of Nepalese commercial banks

4.1.2.1 Analysis of Return on investment (ROI)

Return on investment ratio shows how efficiently the organization is investing it fund in different sector for generating profit. The higher the ratio the better the organization profit. The ROI ratio measures how efficiently the organization can earn on its investment. ROI measures the profitability position of the organization.

Table 4.2

Return on investment of commercial banks (in %)

Fiscal year	EBL	NIBL	NMB	Average
2011/12	16.61	14.66	5.74	12.34
2012/13	12.02	15.86	8.49	12.12
2013/14	13.87	9.95	2.13	8.65
2014/15	15.88	16.75	16.03	16.22
2015/16	23.83	12.61	9.78	15.41
2016/17	10.42	9.14	8.37	9.31
2017/18	9.51	8.73	13.11	10.45
2018/19	16.77	12.16	14.23	14.39
2019/20	16.60	20.57	19.00	18.72
2020/21	14.03	18.53	21.16	17.91
Average	**14.9542**	**13.8948**	**11.8047**	**13.5512**

Source: Appendix I, II and III

Table 4.2 shows that the return on investment ratio of commercial banks is in fluctuating trend. The average ROI of EBL, NIBL and NMB is 14.9542 %, 13.8948 % and 11.8047 % respectively. EBL has the highest ROI than NIBL and NMB. It indicates that EBL is efficiently investing its funds in different sectors to generate profit. The overall average ROI of CBs is sufficient i.e. 13.5512%. It indicates that the CBs are investing its funds sufficiently in different sector to generate profit; which has been shown in given figure as well:

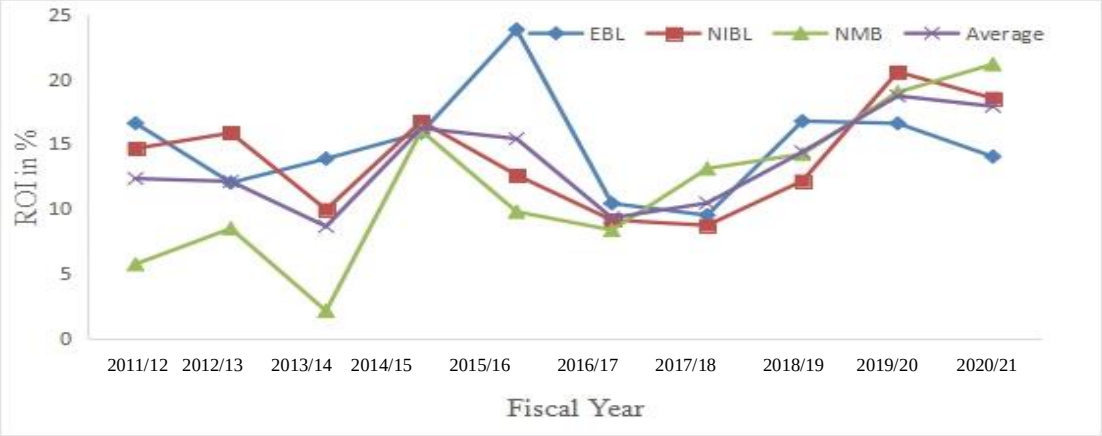


Figure 4.4: Return on investment of commercial banks

4.1.2.2 Analysis of Return on assets (ROA)

It is the ratio of net profit after interest and tax and total assets. The ratio measures how effectively financial resources are invested in firm's assets to generate profitability. Higher ROA reflects the efficiency of bank in using its overall resources.

Table 4.3

Return on assets of commercial banks (in %)

Fiscal year	EBL	NIBL	NMB	Average
2011/12	2.01	2.21	1.18	1.8
2012/13	2.01	2.02	1.39	1.81
2013/14	1.95	1.58	.28	1.27
2014/15	2.24	2.62	1.43	2.10
2015/16	2.20	2.25	1.36	1.94
2016/17	1.59	1.88	1.21	1.56
2017/18	1.52	1.97	1.49	1.66
2018/19	1.72	2.06	1.74	1.84
2019/20	1.78	2.13	1.65	1.85
2020/21	1.80	1.79	1.67	1.75
Average	**1.8824**	**2.0503**	**1.3401**	**1.7576**

Source: Appendix I, II and III

Table 4.3 shows that the sample banks have mixed trend on their return on total assets ratio. The average ROA of EBL, NIBL and NMB is 1.8824 %, 2.0503 % and 1.3401 % respectively. In comparison, NIBL has the highest average ROA, it can be said that NIBL utilities the overall resources efficiently than EBL and NMB. The overall average ROA of CBs is not satisfactory i.e. 1.7576% due to the increase in total assets by merger and acquisition and the generation of the income has not been upto the mark.

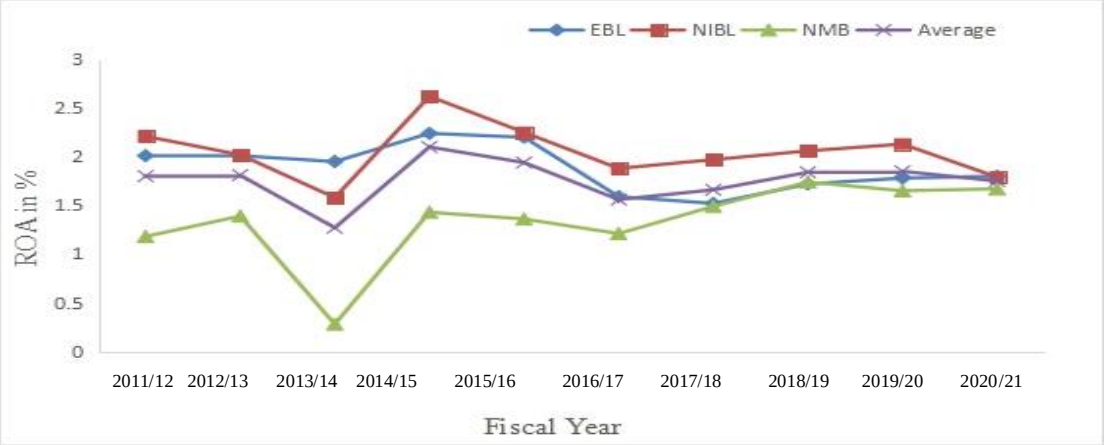


Figure 4.5: Return on assets of commercial banks

4.1.2.3 Analysis of Return on equity (ROE)

Return on equity shows the proportion of net profit of the bank to its shareholders' equity. It measures the efficiency of equity in generating the net profit of the bank. The ratio is calculated by dividing the net profit of the bank by its shareholders' equity.

Table 4.4

Return on equity of commercial banks (in %)

Fiscal year	EBL	NIBL	NMB	Average
2011/12	30.14	27.61	8.61	22.12
2012/13	29.90	22.81	10.04	20.92
2013/14	26.12	17.17	2.30	15.20
2014/15	30.47	27.28	15.49	24.41
2015/16	28.40	24.48	14.58	22.49
2016/17	22.84	20.01	15.20	19.35
2017/18	20.32	15.66	16.25	17.41
2018/19	17.38	16.65	14.06	16.03
2019/20	16.00	14.71	11.24	13.98
2020/21	17.33	13.00	12.97	14.43
Average	**23.89**	**19.9372**	**12.0731**	**18.6334**

Source: Appendix I, II and III

Table 4.4 shows the return on equity of CBs is in decreasing trend over the period. The average ROE of EBL, NIBL and NMB is 23.89 %, 19.9372 % and 12.0731 % respectively. EBL has the maximum ROE than NIBL and NMB. It indicates that EBL equity is more efficient in generating the net profit than other banks. The overall average ROE of CBs is sufficient i.e. 18.6334%, it indicates that the equity of CBs is sufficient in generating the net profit.

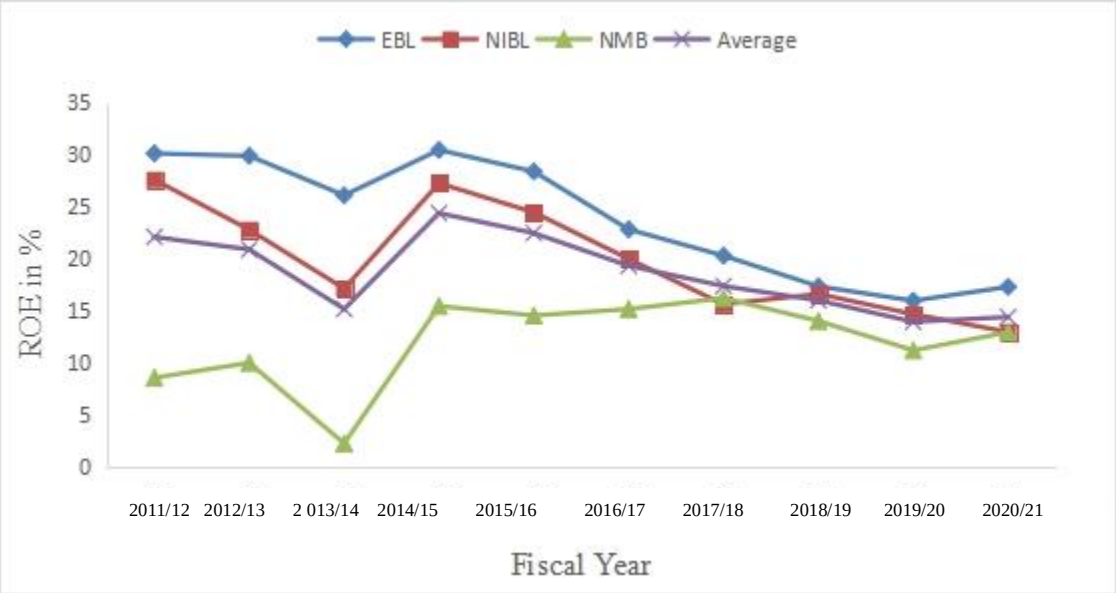


Figure 4.6: Return on equity of commercial banks

4.1.3 Effect of the investment portfolio choices in the performance of Nepalese commercial banks

4.1.3.1 Risk and return on individual investment assets and investment portfolio

Risk is an important element since investment with greater risk requires a higher return than investment with lower risk. In this section, standard deviation and coefficient of variation are taken as the measuring tools of risk and average return is taken as to measure expected return.

4.1.3.1.1 Risk and return on share and debenture

The return on shares and debentures considers dividend yield and capital gain yield or return is the combination of capital gain yield and dividend yield. Results of the analysis have been shown in below table:

Table 4.5

Risk and return on share and debenture of sample banks (in %)

Fiscal year	EBL	NIBL	NMB	Average
2011/12	-31.16	-45.61	-36.77	-37.85
2012/13	-29.20	-16.31	-27.80	-24.44
2013/14	-2.69	6.02	-7.69	-1.45
2014/15	59.83	65.17	45.56	56.85
2015/16	69.26	30.74	113.13	71.04
2016/17	-18.09	-22.88	.16	-13.60
2017/18	62.97	56.53	63.91	61.14
2018/19	-59.05	-19.71	-30.67	-36.48
2019/20	-49.52	-11.30	-25.14	-28.65
2020/21	4.22	-12.00	20.39	4.20
Average	**0.657**	**3.065**	**11.508**	**5.0767**
Standard deviation	**47.6707**	**36.3012**	**49.2237**	**44.3985**
CV	**72.5581**	**11.8438**	**4.2773**	**29.5597**

Source: Appendix IV, V and VI

Table 4.5 shows the risk and return on share and debentures of CBs. The return of CBs is fluctuating over the period. The average return on share and debenture of EBL, NIBL and NMB is 0.657%, 3.065% and 11.508% respectively. The standard deviation on share and debenture return of EBL, NIBL and NMB is 47.6707 %, 36.3012 % and 49.2237 % respectively. The CV of EBL, NIBL and NMB is 72.5581, 11.8438 and 4.2773 respectively. On the basis of average return NMB performs better than other banks due to highest return. Similarly, on the basis of standard deviation, NIBL is better than other due to lowest standard deviation. However, NMB has better performance due to the lowest CV. The overall average return on share and debenture is 5.0767% and standard deviation is 44.3985%. It indicates that investment on share and debenture is riskier. The CV of CBs return on share and debenture is 29.5597 which is not consistent.

4.1.3.1.2 Risk and return on government securities

Government securities are the fixed income securities issued by the government. These securities are among the safest of all investments as the government is unlikely

to default on interest or on principle repayments. The risk and return on government securities such as treasury bills, national saving bond etc. can be calculated.

Table 4.6

Risk and return on government securities (in %)

Fiscal year	EBL	NIBL	NMB	Average
2011/12	5.49	4.05	4.26	4.6
2012/13	5.07	6.01	6.09	5.72
2013/14	6.92	3.92	5.28	5.37
2014/15	3.55	2.94	6.42	4.30
2015/16	9.47	2.27	3.76	5.17
2016/17	1.12	.78	1.32	1.07
2017/18	1.80	1.05	2.52	1.79
2018/19	2.80	1.70	2.83	2.44
2019/20	3.63	3.50	5.09	4.07
2020/21	4.27	4.50	5.47	4.75
Average	**4.4109**	**3.0714**	**4.3043**	**3.9289**
Standard deviation	**2.4760**	**1.6457**	**1.6721**	**1.9313**
CV	**0.5613**	**0.5358**	**0.3885**	**0.4952**

Source: Appendix IV, V and VI

Table 4.6 shows the risk and return on government securities of CBs. The return of CBs is fluctuating over the period. The average return on government securities of EBL, NIBL and NMB is 4.4109 %, 3.0714 % and 4.3043 % respectively. The standard deviation on government securities' return of EBL, NIBL and NMB is 2.476 %, 1.6457 % and 1.6721 % respectively. The CV of EBL, NIBL and NMB is 0.5613, 0.5358 and 0.3885 respectively. On the basis of average return EBL performs better than other banks due to highest return. Similarly, on the basis of standard deviation, NIBL is better than other due to lowest standard deviation. However, NMB has better performance due to the lowest CV.

The overall average return on government. Securities of CBs is 3.9289%, standard deviation is 1.9313% and CV is 0.4952. It indicates that the investment on government. securities is consistent and less riskier.

4.1.3.1.3 Risk and return on loan and advance

Table 4.7

Risk and return on loan and advance (in %)

Fiscal year	EBL	NIBL	NMB	Average
2011/12	10.16	10.67	9.30	10.04
2012/13	12.46	13.23	11.64	12.44
2013/14	12.54	13.55	13.14	13.08
2014/15	10.69	12.00	10.50	11.06
2015/16	10.29	10.73	9.23	10.08
2016/17	8.91	8.49	7.97	8.46
2017/18	7.03	7.67	7.35	7.35
2018/19	8.29	8.40	9.47	8.72
2019/20	10.06	10.48	11.80	10.78
2020/21	8.42	10.91	11.34	10.22
Average	**9.8856**	**10.6124**	**10.1750**	**10.2243**
Standard deviation	**1.7769**	**1.9896**	**1.8258**	**5.5923**
CV	**0.1797**	**0.1875**	**0.1794**	**0.5467**

Source: Appendix IV, V and VI

Table 4.7 shows the risk and return on loan and advance of CBs. The return of CBs is fluctuating over the period. The average return on government securities of EBL, NIBL and NMB is 9.8856 %, 10.6124 % and 10.175 % respectively. The standard deviation on government securities' return of EBL, NIBL and NMB is 1.7769 %, 1.9896 % and 1.8258 % respectively. The CV of EBL, NIBL and NMB is 0.1797, 0.1875 and 0.1794 respectively. On the basis of average return NIBL performs better than other banks due to highest return. Similarly, on the basis of standard deviation, EBL is better than other due to lowest standard deviation. However, NMB has better performance due to the lowest CV.

The overall average return on loan and advance of CBs is 10.2243%, standard deviation is 5.5923% and CV is 0.5467. It indicates that the return on loan and advance is consistent but riskier.

4.1.3.2 Risk and return on investment portfolio

4.1.3.2.1 Investment portfolio return

The expected return on a portfolio (R_p) is simply the weighted average of the expected returns on the individual assets in the portfolio with the weight being the fraction of the total portfolio in each asset. In this study, investment portfolio of commercial banks is calculated by investment on government securities, loan and advances and share and debentures.

Table 4.8

Portfolio return of commercial banks (in %)

Banks	Proportion (W_G)	Proportion (W_L)	Proportion (W_S)	R_G	R_L	R_S	Portfolio return (R_P)
EBL	0.1325	0.8662	0.0014	4.4109	9.8856	0.657	9.1483
NIBL	0.1070	0.8872	0.0058	3.0714	10.6124	3.065	9.7617
NMB	0.1125	0.8805	0.0069	4.3043	10.1750	11.508	9.5227
Average							**9.479**

Source: Appendix IV, V, VI, and VII

Table 4.8 shows the portfolio return of sample banks. The portfolio returns on EBL, NIBL and NMB is 9.1483 %, 9.7617 % and 9.5227 % respectively. NIBL has highest portfolio return and EBL has the lowest portfolio return. So, according to the portfolio return NIBL has efficiently managed its investment. In overall, the average portfolio return of commercial banks is 9.479%, indicates that the return has been satisfactory.

4.1.3.2.2 Investment portfolio risk

Expected risk on a portfolio is a function of the proportions invested in the components, the riskiness of the components and correlation of returns on the components securities. It is measured by standard deviation. The standard deviation of portfolio is not simply the weighted average of standard deviation of individual securities. The portfolio risk is affected by the association of movement of returns of two securities. The degree to which the assets return move together is measured by the covariance. Hence, by combining the measures of individual asset risk, relative asset weights and co-movement of assets returns (covariance or correlation) the risk of the portfolio can be eliminated. Here, firstly covariance or correlation between the

assets can be calculated by using SPSS application and then portfolio risk can be calculated.

Table 4.9

Portfolio risk of commercial banks (in %)

Banks	$\sigma_p = \sqrt{W_S^2\sigma_S^2 + W_G^2\sigma_G^2 + W_L^2\sigma_L^2 + 2W_SW_Gr_{SG}\sigma_S\sigma_G + 2W_SW_Lr_{SL}\sigma_S\sigma_L + 2W_GW_Lr_{SL}\sigma_G\sigma_L}$
EBL	2.4784
NIBL	1.9527
NMB	1.6919
Average	**2.041**

Table 4.9 shows the risk of portfolio return of sample banks. The standard deviation measures the risk. The portfolio standard deviation of EBL, NIBL and NMB is 2.4784 %, 1.9527 % and 1.6919 % respectively. It indicates that EBL is highly risky portfolio due to highest standard deviation and NMB and NIBL has less risky portfolio due to lowest standard deviation. The overall average portfolio risk of commercial banks is 2.041%. This indicates that the EBL is a risky portfolio since the standard deviation is higher than the average calculation.

4.1.3.3 Investment portfolio risk and return analysis of commercial banks

Table 4.10

Analysis of investment portfolio risk and return (in %)

Banks	**EBL**	**NIBL**	**NMB**	**Average**
Portfolio return	9.1483%	9.7617%	9.5227%	9.479%
Portfolio risk	2.4784%	1.9527%	1.6919%	2.041%
CV	**0.2709**	**0.2000**	**0.1777**	**0.216**

Table 4.10 shows the investment portfolio risk and return of commercial banks. The portfolio returns on EBL, NIBL and NMB is 9.1483%, 9.7617% and 9.5227 % respectively. NIBL has highest portfolio return and EBL has the lowest portfolio return. The standard deviation of EBL, NIBL and NMB is 2.4784 %, 1.9527 % and 1.6919 % respectively. It indicates that EBL is highly risky portfolio due to highest standard deviation and NMB has less risky portfolio due to lowest standard deviation. The CV of EBL, NIBL and NMB is 0.2709, 0.2 and 0.1777 respectively. In comparison, NMB has efficiently managed its portfolio due to lowest CV. In overall,

the commercial banks portfolio return is 9.479%, which is less than the average rate of return on investment on loan and advance. However, it is more than the average rate of return on investment on government. securities and share and debentures of sample commercial banks. The average risk of portfolio of CBs i.e. standard deviation is 2.041% which is considerably less than the expected risk of investment on share and debentures of sample commercial banks and more than the expected risk of investment on government securities and loan and advance. The overall CV of CBs is 0.216; it indicates that the portfolio return is consistent.

4.1.3.4 Analysis of the regression

Regression analysis is concerned with the study of the dependence of one variable, dependent variable, on one or more other variables, the independent variable with a view to estimating the average value of the dependent variable from the known values of the independent variable. In regression analysis there are two types of variables. The variable whose value is influenced or is to be predicted is called dependent variable and the variable which influences the value or is used for prediction, is called independent variable. In this study ROA and ROE are dependent variables and investment portfolio choices are independent variables.

Model 1

$ROA = \beta_0 + \beta_1$ Share & Debenture $+ \beta_2$ Government. Securities $+ \beta_3$ L/A $+ \beta_4$ Size $+ \varepsilon_i$

Table 4.11

Regression analysis of Model 1

Model 1	Coefficients	Standard Error	P value
(Constant)	3.36	2.01	0.145
Share &debenture	0.15	0.98	0.461
Governmentsecurities	0.07	0.05	0.036
Loan & advance	203.27	1.89	0.013
Size	-0.156	0.37	0.0228
R Square	0.312		

It shows their coefficients of the independent variables. The regression model can be written mathematically as:

ROA = 3.36 + 0.15 X_1 + 0.07 X_2+ 203.27 X_3 + (-0.156 X_4) where,

X1= Share and Debenture

X2= Government Securities

X3= Loans and advances

X4= Size

From the table 4.11 regression equation it depicts that holding investment in share and debenture, government securities, loan and advance and size of investment, financial performance of commercial banks would stand at 3.36. The coefficient of share and debenture is 0.15 and the p-value is 0.461, it is more than 0.05. So, it is insignificant. So, there is some effect of investment on share and debentures in financial performance of commercial banks. The coefficient of investment on government. securities is 0.07 and p-value is 0.036 which is less than 0.05. So, it is significant i.e. a unit increase in investment on government securities would lead to increase in financial performance of CBs by a factor of 0.07. The coefficient of investment on loan and advance is 203.27 and p-value is 0.013. It is less than 0.05. So, it is significant. It indicates that a unit increase in investment in L/A would lead to increase in financial performance of CBs by a factor 203.27. The coefficient of size of bank is -0.156 and p-value is 0.0228 which is less than 0.05. It indicates that a unit increase in size of the CBs would lead to decrease in financial performance of CBs by a factor of 0.156.

The value of R^2 is 0.312, which indicates there is sufficient variability in financial performance explained by investment portfolio choice (share and debenture, government. Securities, L/A and size). Hence, the result from the regression analyses model in Table 4.11 above suggests that share and debenture, government. Securities and loan and advance indicates positive impact on financial perfromance of CBs in Nepal, while size of CBs indicates negative impact on financial performance of CBs in Nepal.

Model 2

ROE = β_0 + β_1 Share & Debenture + β_2 Government. Securities + β_3 L/A + β_4 Size + εi

Table 4.12

Regression analysis of Model 2

Model 2	Coefficients	Standard Error	P value
(Constant)	94.42	22.81	0.006
Share & debenture	0.12	11.16	0.692
Government Securities	0.94	0.56	0.146
Loan & advance	480.82	0.80	0.048
Size	-13.36	4.25	0.020
R Square	0.517		

It shows the coefficients of the independent variables. The regression model can be written mathematically as:

ROE = 94.42 + 0.12 X_1 + 0.94 X_2+ 480.82 X_3 + (-13.36 X_4) where,

X1= Share and Debenture

X2= Government Securities

X3= Loans and advances

X4= Size

From the above regression equation it was revealed that holding investment in share and debenture, government. Securities, loan and advance and size of investment to a constant zero, financial performance of commercial banks would stand at 94.42. The coefficient of share and debenture is 0.12 and the p-value is 0.692, it is more than 0.05. So, it is insignificant. So, there is no effect of investment on share and debentures in financial performance of commercial banks. The coefficient of investment on government securities is 0.94 and p-value is 0.146 which is more than 0.05. So, it is insignificant i.e. there is no evidence of a unit increase in investment on government securities would lead to increase in financial performance of CBs by a factor of 0.94. The coefficient of investment on loan and advance is 480.82 and p-value is 0.048, it is less than 0.05. So, it is significant. It indicates that a unit increase in investment in L/A would lead to increase in financial performance of CBs by a factor 480.82. The coefficient of size of bank is -13.36 and p-value is 0.020 which is less than 0.05. It indicates that a unit increase in size of the CBs would lead to decrease in financial performance of CBs by a factor of 13.36.

The value of R^2 is 0.517, which indicates there is major variability in financial performance explained by investment portfolio choice (share and debenture, government securities, loan and advance and size). Hence, the result from the regression analyses model in Table 4.12 above suggests that share and debenture, government. Securities and loan and advance indicate positive impact on financial performance of CBs in Nepal, while size of CBs indicates negative impact on financial performance of CBs in Nepal.

4.2 Major findings of the study

Having completed the basic analysis required for this study, the final and most important task of the research is to enlist the findings. Based on various categories of analysis adopted in this study, a comprehensive summary of the major findings of this study are presented below:

i. Commercial banks have invested more than 85 on loan and advances, more than 10 on government securities and less than 1 on share and debentures. It can be concluded that commercial banks are mainly interested to invest on loan and advances which gives high return. They are less interested to invest on share and debentures which also gives high return but have high risk. Commercial banks have also invested on government securities more consistently which are less risk and low return.

ii. The average ROI of EBL, NIBL and NMB is 14.9542, 13.8948 and 11.8047 respectively. The overall average ROI of CBs is sufficient i.e. 13.5512. It indicates that the CBs are investing its funds sufficiently in different sector to generate profit.

iii. The average ROA of EBL, NIBL and NMB is 1.8824, 2.0503 and 1.3401 respectively. The overall average ROA of CBs is not satisfactory i.e. 1.7576. It indicates that the CBs are not able to utilize their overall resources efficiently.

iv. The average ROE of EBL, NIBL and NMB is 23.89, 19.9372 and 12.0731 respectively. The overall average ROE of CBs is sufficient i.e. 18.6334 it indicates that the equity of CBs is sufficient in generating the net profit.

v. The overall average return on share and debenture is 5.0767 and standard deviation is 44.3985. It indicates that investment on share and debenture is riskier. The CV of CBs return on share and debenture is 29.5597 which is not consistent.

vi. The overall average returns on government securities of CBs is 3.9289 and standard deviation is 1.9313 and CV is 0.4952. It indicates that the investment on government securities is consistent and less risky.

vii. The overall average return on loan and advance of CBs is 10.2243, standard deviation is 5.5923 and CV is 0.5467. It indicates that the return on loan and advance is consistent but riskier.

viii. The portfolio returns on EBL, NIBL and NMB is 9.0341, 9.7587 and 9.6599 respectively. In overall, the average portfolio return of commercial banks is 9.479.

ix. The portfolio standard deviation of EBL, NIBL and NMB is 2.4784 ,1.9527 and 1.6919 respectively. The overall average portfolio risk of commercial banks is 2.041.

x. The CV of portfolio investment of EBL, NIBL and NMB is 0.2743, 0.2001 and 0.1751 respectively. The overall CV of CBs is 0.216, it indicates that the portfolio return is consistent.

xi. The estimated coefficients of share and debenture, government. Securities, loan and advance on ROA are 3.36, 0.15, 0.07, 203.27 and -0.156 respectively. Similarly, the estimated coefficients of share and debenture, government. Securities, loan and advance on ROE are 94.42, 0.12, 0.94, 480.82 and -13.36 respectively. It suggests that share and debenture, government. Securities and loan and advance indicates positive impact on financial performance of CBs in Nepal, while size of CBs indicates negative impact on financial performance of CBs in Nepal.

xii. The value of R^2 is 0.312, which indicates there is sufficient variability in financial performance (ROA) explained by investment portfolio choice (share and debenture, government. Securities, loan and advance and size).

xiii. The value of R^2 is 0.678, which indicates there is strong variability in financial performance (ROE) explained by investment portfolio choice (share and debenture, government. Securities, L/A and size).

4.3 Discussion

This study has used ROI, ROA and ROE to measure the financial position of the banks. This ratio indicates that the position of CBs is in satisfactory condition. The study of Ramtel (2010) also found that the financial position of CBs are satisfactory.

The results are consistent. It may be so because similar financial tools are used to analyze the financial position.

This study shows that the Nepalese commercial banks are mainly interested to invest on loan and advance and government securities and less interested to invest on share and debenture. The study of Shrestha (2011) shows that Nepalese commercial banks are mainly interested to invest on government securities and less interested to invest on share and debenture. The results are not so consistent. Because the researcher did not focus on loan and advance investment.

This study also found that the investment portfolio choice has strong impact on the financial performance of commercial banks. The portfolio choices i.e share and debenture, government securities and loan and advance have positive impact on financial performance of CBs. However, the size has negative impact of financial performance of CBs. The study of Kamwaro (2013) and Kimeu (2015) concluded that all the portfolio choices such as bond, equity, mutual funds and real estates and size have positive impact on financial performance of investment companies. The result of impact of size on financial performance is not consistent. It may be so because of different sectors study i.e. commercial banks and investment companies or may be because of the different countries economy.

CHAPTER V

SUMMARY AND CONCLUSION

5.1 Summary

This study has been conducted with the objective to examine the portfolio investment management of commercial banks in Nepal. Financial tools and statistical tools have been used to make this study more effective and informative. This study has covered ten years' data from 2011/12 to 2020/21 In this section; the researcher has summarized the overall study.

The study has been divided into five chapters. The first chapter contains background of the study, statement of the problems, objectives of the study, significance of the study and limitation of the study. Second chapter is the brief review of literature related to this study which included the conceptual review, empirical review, conceptual framework and research gap. Third chapter deals with the methodology followed to achieving the objectives of the study, which include research design, population and sample, sampling procedure, collection of data and data analysis tools and techniques. Finally, chapter four deals with presentation analysis and interpretation of data, collected from various sources. It also includes the finding and discussion of the study. For the details analysis of sample commercial banks in Nepal, in this study the sample banks data are collected through secondary sources and different data analysis tools have been used. For the analysis of data, mainly this study focuses on share and debentures, government securities and loan and advance and their relation with the return on assets and return on equity.

Investment portfolio is one such tool that helps for proper utilization of resources. Portfolio theory deals with the selection of optimal portfolios that is portfolio provides the highest possible return for any specific degree of risk or the lowest possible risk for any specified return. Investment decision is one of the major decision functions of financial management. Banks should accept that type of securities which are commercial, durable, marketable, stable, transferrable and high market prices. A bank must diversify its investment on different sectors and in different securities.

Three commercial banks are taken as sample to analyze the portfolio investment management of the commercial banks. During the research, a brief review of literature has been conducted. As this research is related to the investment portfolio, financial

strength and weakness of commercial banks have been measured on the basis of annual reports. In that course, different tools have been used. Moreover, the various financial tools like ratio analysis, risk and return analysis and statistical tools like arithmetic mean, standard deviation, coefficient of variation, Karl Pearson's coefficient of correlation, regression have been extensively used. Tables and figures are used to present the data and results, secondary data are collected from the NRB reports, annual reports and other related data.

With respect to ratio analysis, different ratios related to investment portfolio have been used. EBL has highest return and highest risk and NIBL and NMB has lowest return and lowest risk. . EBL has highest ROI and ROE as compared to other two CBs. Similarly, Also, NIBL has highest ROA as compared to other two CBs. This study also found that government securities has lower risk and lower return, loan and advance has moderate risk and moderate return and share and debenture has higher risk and higher return. The overall CV of CBs it indicates that the portfolio return of CBs is consistent. The CBs are not used successful in mobilizing their resources in the field of shares and debenture. They invested very nominal percentage of total outside investment on share and debenture of other companies.

The coefficient shows that share and debenture, government Securities and loan and advance indicates positive impact on financial performance of CBs in Nepal, while size of CBs indicates negative impact on financial performance of CBs in Nepal. The regression analysis indicates that there is sufficient variability in financial performance (ROA and ROE) explained by investment portfolio choice (share and debenture, government. Securities, L/A and size).

5.2 Conclusion

This study analyzed the portfolio management of commercial banks in Nepal. Some financial and statistical tools are used to analyze the portfolio behaviour. Portfolio management is analyzed by risk and return of investment assets. Risk and return are analyzed by using the stock price, dividend, income from government securities and income from loan and advance.

From the existing situation of portfolio management of Nepalese commercial banks it can be concluded that commercial bank are significantly interested to invest on loan and advance which gives high return. Commercial banks have also invested some

government securities more consistently which are less risky and gives low return. They are less interested to invest on share and debenture which gives high return but consequently they have high risk.

Similarly, to measure the performance of portfolio management of commercial bank the finding of the study period revealed that the overall average ROI and ROE indicates that the equity of the commercial banks is sufficient in generating the net profit. ROI shows how efficiently the organization is investing its fund in different sector for generating profit. ROE shows the proportion of net profit of the bank to its shareholders equity. ROA indicates that how profitable a company is in relation to its total assets and commercial banks have not been able to utilize their overall resources efficiently.

From the findings, the study concluded that investment choice affects the financial performance of CBs in Nepal. The study also revealed that investment in share and debenture, government Securities and loan and advance positively influences the financial performance of CBs in Nepal. But the coefficient size of CBs is found to be negative and this has impacted negatively in the financial performance of the commercial banks.

5.3 Implications

Some of the valuable implications are drawn and put forwarded based on findings and conclusion.

Managerial implications

i. Due to lack of investment portfolio concept, mostly banks are interested to invest their funds in securable, less risky and liquid assets. Generally, high risky assets give more profit and less risky assets give less profit. Even though, there is higher return as well as lower risk, banks should not lay all its eggs on the same basket. CBs should diversify their funds in various assets with suitable weight. Hence, CBs can generate handsome profit with lower risk by portfolio diversification.

ii. From the study, CBs are more interested to invest on loan and advances and then government securities. CBs invest very low portion of its total outside investment and total deposit on share and debenture of other companies. They

invested very nominal percentage on share and debenture so it is suggested to all CBs to give priority to investment on share and debenture.

iii. Portfolio condition of banks should be regularly revised from time to time or it should be upgrading as per environment. It should always try to maintain the equilibrium in the portfolio condition of the bank. The bank should always try to make continuous efforts to explore competitive and highly yielding investment opportunities to optimize investment portfolio.

iv. Return on assets of CBs is not satisfactory position and size and performance of CBs have a negative relationship, so CBs should give more emphasis on better utilize assets to increase the return by reducing the portion of idle assets. CBs always keep a careful watch on every investment made i.e. what types, kind of projects and sectors are suitable for investment.

v. Commercial banks of Nepal are not successful to formulate the appropriate investment policy and to implement it effectively. They are not considering about portfolio optimization. They are running by the instructions and direction of NRB and government. Therefore, commercial banks must analyze the investment areas, develop efficient and effective investment strategy, and then take the investment decision.

Implication for future researcher

i. This study was limited on the portfolio management of commercial banks. Hence, the researcher suggested that future researchers should focus on the contribution of loan portfolio management to the lending performance, the impact of portfolio management to the economic growth of the country etc.

ii. The study used observations only from commercial banking sectors. The results are not representatives of all banking sectors of Nepal. Hence, there is a need for future research to include larger number of observation from the different sectors of banking sector other than commercial banks.

iii. This study has just considered three sample banks, which may not be sufficient sample size. So future studies can take more sample size.

REFERENCES

Agblobi, A. D., Kuhorfah, O. T. Y., & Asamoah, P. (2020). Portfolio Management and Profitability of Commercial Banks. *Journal of Business and Economic Development*, *5*(4), 244-251.

Arditti, F. D. (1967). Risk and the required return on equity. *The Journal of \Finance*, *22*(1), 19-36

Bansal, P., & Clelland, I. (2004). Talking trash: Legitimacy, impression management, and unsystematic risk in the context of the natural environment. *Academy of Management journal*, *47*(1), 93-103.

Bhatia, A., & Thakur, A. (2018). Corporate diversification and firm performance: an empirical investigation of causality. *International Journal of Organizational Analysis*.57(4),78-92

Bradley, S.P. & Crane, D.B.(1975).*Management of Bank Portfolios*. New York: John Wiley &Sons.

Campbell, J. Y. (1996). Understanding risk and return. *Journal of Political economy*, *104*(2), 298-345.

Chatterjee, S., & Wernerfelt, B. (1991). The link between resources and type of diversification: Theory and evidence. *Strategic management journal*, *12*(1), 33-48.

Cheney, J. M., & Moses, E. A. (1992). *Fundamentals of investments*. 10th edition, New York: West Publishing Company.

Chency,J m., & Mosses, E.A. (1995). *Fundamental of investment*. St. Paul: West publication Company.

Christensen, H. K., & Montgomery, C. A. (1981). Corporate economic performance: Diversification strategy versus market structure. *Strategic Management Journal*, *2*(4), 327-343.

Danesh, D., Ryan, M. J., & Abbasi, A. (2018). Multi-criteria decision-making methods for project portfolio management: a literature review. *International Journal of Management and Decision Making*, *17*(1), 75-94.

Das, S. B., Menon, J., Severino, R. C., & Shrestha, O. L. (Eds.). (2013). *The ASEAN economic community: A work in progress*. New York. Institute of Southeast Asian Studies.

Drake, P. P., & Fabozzi, F. J. (2010). *The basics of finance: An introduction to financial markets, business finance, and portfolio management*.Kenya. John Wiley & Sons.

Ferrari, A., Masetti, O., & Ren, J. (2018). Interest rate caps: the theory and the practice. *World Bank Policy Research Working Paper*, (8398).

Geyer, GA., Kossmeier, S., & Pichler, S. (2004). Measuring systematic risk in EMU government yield spreads. *Review of Finance*, *8*(2), 171-197.

Flamini, C., Valentina, C., McDonald, G., & Liliana, S. (2009). The Determinants of Commercial Bank Profitability. *Sub-Saharan Africa. IMF Working Paper*.

Gitman, J. L.(2000*).principle of Managerial Finance*.9th edition, New Delhi: New Delhi Pearson Education Asia Pvt. Ltd

Gitman, L. J. (2009). *Introduction to managerial finance*. New York. Prentice Hall, a division of Pearson Education, Inc.

Gololo, I. A. (2018). Challenges of the Nigerian Banking Sector and the Way Forward. *American Finance & Banking Review*, *3*(1), 26-34.

Gorton, G., & Rouwenhorst, K. G. (2006). Facts and fantasies about commodity futures. *Financial Analysts Journal*, *62*(2), 47-68.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, *3*(4), 305-360.

Jewell, J. J., & Mankin, J. A. (2011). What is your ROA? An investigation of the many formulas for calculating return on assets. *Academy of Educational Leadership Journal*, *15*, 79-91.

Kamwaro, E. K. (2013). *The impact of investment portfolio choice on financial performance of investment companies in Kenya* (Doctoral dissertation, University of Nairobi).

Kiweu, J. M. (2012). Income diversification in the banking sector and earnings volatility: evidence from Kenyan commercial banks. *European Scientific Journal*, *8*(7), 128-148.

Klammer, T. (1993). Improving investment decisions. *Strategic Finance*, *75*(1), 35-48.

Kothari, C. R. (2004). *Research methodology: Methods and techniques*. *New Age International Publishers*, 235-256.

Kumar, M. S., & Okimoto, T. (2011). Dynamics of international integration of government securities' markets. *Journal of Banking & Finance*, *35*(1), 142-154.

Markides, C. C., & Williamson, P. J. (1994). Related diversification, core competences and corporate performance. *Strategic management journal*, *15*(S2), 149-165.

Mazur, M., & Zhang, S. (2015). Diversification discount over the long run: New perspectives. *Finance Research Letters*, *15*, 93-98.

Mitchell, M., & Pulvino, T. (2001). Characteristics of risk and return in risk arbitrage. *the Journal of Finance*, *56*(6), 2135-2175.

Nanda, S. R., Mahanty, B., & Tiwari, M. K. (2010). Clustering Indian stock market data for portfolio management. *Expert Systems with Applications*, *37*(12), 8793-8798.

Ndungu, J. G., & Muturi, W. (2019). Effect of Diversification on Financial Performance of Commercial Banks in Kenya. *International journal of current aspects*, *3*(V), 267-285.

Nirajini, A., & Priya, K. B. (2013). Impact of capital structure on financial performance of the listed trading companies in Sri Lanka. *International Journal of Scientific and Research Publications*, *3*(5), 1-9.

Oliinyk, V., & Kozmenko, O. (2019). Optimization of investment portfolio management. *Serbian Journal of Management*, *14*(2), 373-387.

Orabi, M. M. A. (2020). The Impact of Monetary Inflation on Investment Decisions in Jordanian Industrial Companies. *Modern Applied Science*, *14*(7).350-363.

Palepu, K. (1985). Diversification strategy, profit performance and the entropy measure. *Strategic management journal*, *6*(3), 239-255.

Park, K., & Jang, S. S. (2013). Capital structure, free cash flow, diversification and firm performance: A holistic analysis. *International Journal of Hospitality Management*, *33*, 51-63.

Paudel, R. B., & Koirala, S. (2006). Application of Markowitz and Sharpe Models in Nepalese Stock. *Journal of Nepalese Business Studies*, *3*(1), 18-35.

Platanakis, E., & Urquhart, A. (2019). Portfolio management with cryptocurrencies: The role of estimation risk. *Economics Letters*, *177*, 76-80.

Psillaki, M., & Mamatzakis, E. (2017). What drives bank performance in transitions economies? The impact of reforms and regulations. *Research in International Business and Finance, 39*, 578-594.

Ramtel, R. (2010). *An Analysis on Investment Portfolio of Commercial Banks in Nepal* (Doctoral dissertation, Post Graduate Campus, Biratnagar).

Rose, A. M., & Rose, J. M. (2003, September). The effects of fraud risk assessments and a risk analysis decision aid on auditors' evaluation of evidence and judgment. *In Accounting Forum*, 312-338.

Thompson, D. J. (1976). Sources of systematic risk in common stocks. *The Journal of Business*, *49*(2), 173-188.

Van Horne James, C. (2002). *Financial Management & Policy*, 12/E.Itlean. *Pearson Education India*, 48-69.

Yakubov, U., & Meliboev, D. (2020). THE ANALYSIS OF INVESTMENT ACTIVITIES OF COMMERCIAL BANKS. *International Finance and Accounting*, *2020*(2), 32-49.

Zahavi, T., & Lavie, D. (2013). Intra-industry diversification and firm performance. *Strategic Management Journal*, *34*(8), 978-998.

Appendix 1

Total investment, total deposits, net profit, total assets and shareholders' equity of EBL

(Rs. in millions)

F/Y	Total Investment	Net Profit	Total Assets	Shareholders' Equity
2011/12	5,008	832	41,383	2,760
2012/13	7,744	931	46,236	3,114
2013/14	7,864	1,091	55,813	4,177
2014/15	9,264	1,471	65,741	4,828
2015/16	65,040	1,550	70,445	5,457
2016/17	15,103	1,574	99,153	6,891
2017/18	18,199	1,730	113,885	8,514
2018/19	11,965	2,006	116,510	11,545
2019/20	15,554	2,582	144,811	16,135
2020/21	21,769	3,054	170,078	17,625

Source: Annual reports of EBL, NIBL and NMB

Appendix II

Total investment, total deposits, net profit, total assets and shareholders' equity of NIBL

(Rs. in millions)

F/Y	Total Investment	Net Profit	Total Assets	Shareholders' Equity
2011/12	8,636	1,266	57,305	4,585
2012/13	7,423	1,177	58,357	5,159
2013/14	10,438	1,039	65,756	6,050
2014/15	11,435	1,915	73,152	7,021
2015/16	15,384	1,940	86,174	7,926
2016/17	21,463	1,962	104,345	9,807
2017/18	29,227	2,551	129,783	16,288
2018/19	25,616	3,114	150,818	18,708
2019/20	17,789	3,659	171,894	24,871
2020/21	17,942	3,324	185,842	25,579

Source: Annual reports of EBL, NIBL and NMB

Appendix III

Total investment, total deposits, net profit, total assets and shareholders' equity of NMB

(Rs. in millions)

Fiscal Year	Total Investment	Net Profit	Total Assets	Shareholders' Equity
2011/12	2,716	156	13,227	1,812
2012/13	2,615	222	15,948	2,211
2013/14	2,440	52	18,495	2,264
2014/15	2,246	360	25,126	2,324
2015/16	4,191	410	30,212	2,813
2016/17	5,984	501	41,337	3,296
2017/18	8,504	1,115	74,613	6,862
2018/19	10,598	1,508	86,863	10,728
2019/20	9,757	1,854	112,391	16,489
2020/21	10,668	2,257	135,470	17,403

Source: Annual reports of EBL, NIBL and NMB

Appendix IV

Interest earned from government securities and loan & advance, investment on government securities and loan & advance, MPS and DPS of EBL

Fiscal Year	IEGS (in millions)	IELA (in millions)	IGS (in millions)	ILA (in millions)	MPS	DPS
2011/12	-	-	-	-	2,455	-
2012/13	239	2,801	4,354	27,556	1,630	60
2013/14	362	3,870	7,145	31,058	1094	60
2014/15	420	4,505	6,069	35,911	1033	31.58
2015/16	248	4,637	6,989	43,393	1591	60
2016/17	241	4,897	2,544	47,572	2631	62
2017/18	96	4,852	8,588	54,482	2120	35
2018/19	186	4,779	10,362	67,955	3385	70
2019/20	239	6,408	8,538	77,288	1353	33
2020/21	526	9,474	14,483	94,182	663	20

Source: Annual reports of EBL, NIBL and NMB

Appendix V

Interest earned from government securities and loan & advance, investment on government securities and loan & advance, MPS and DPS of NIBL

Fiscal Year	IEGS (in millions)	IELA (in millions)	IGS (in millions)	ILA (in millions)	MPS	DPS
2011/12	-	-	-	-	1,388	-
2012/13	170	4,303	4,202	40,318	705	50
2013/14	258	5,436	4,295	41,096	515	75
2014/15	242	5,643	6,170	41,637	511	35
2015/16	176	5,566	5,986	46,400	784	60
2016/17	132	5,582	5,827	52,020	960	54
2017/18	71	5,619	9,103	66,219	704	36.4
2018/19	103	6,552	9,784	85,461	1,040	62
2019/20	209	8,787	12,286	104,625	770	65
2020/21	549	12,662	15,665	120,826	621	62

Source: Annual reports of EBL, NIBL and NMB

Appendix VI

Interest earned from government securities and loan & advance, investment on government securities and loan & advance, MPS and DPS of NMB

Fiscal Year	IEGS (in millions)	IELA (in millions)	IGS (in millions)	ILA (in millions)	MPS	DPS
2011/12	-	-	-	-	499	-
2012/13	68	726	1,598	7,808	295	20.53
2013/14	115	1,305	1,888	11,209	195	18
2014/15	114	1,586	2,158	12,071	180	-
2015/16	99	1,732	1,541	16,491	252	10
2016/17	80	1,890	2,125	20,467	515	22.10
2017/18	59	2,175	4,469	27,289	507	8.84
2018/19	111	3,899	4,402	53,021	810	21
2019/20	190	5,799	6,718	61,213	545	16.58
2020/21	408	8,615	8,017	73,010	358	50

Source: Annual reports of EBL, NIBL and NMB

Appendix- VII

Investment in share & debentures of EBL, NIBL and NMB

(Rs. in Million)

Fiscal year	Investment in share and debenture		
	EBL	**NIBL**	**NMB**
2011/12	100	63	106
2012/13	108	71	102
2013/14	109	172	131
2014/15	24	305	115
2015/16	63	343	110
2016/17	63	533	225
2017/18	76	538	261
2018/19	76	752	424
2020/21	28	832	549
2021/22	28	2059	607

Source: Annual reports of EBL, NIBL and NMB

PORTFOLIO MANAGEMENT OF COMMERCIAL BANKS IN NEPAL

A
PROPOSAL

Submitted by

Maheshwari Kumari Pandey

Central Department of Management

Campus Roll No.: 219/018

Exam Roll No.: 3846/2018

Registration No.: 7-2-177-116-2013

Submitted to

Office of the Dean, Faculty of Management, Tribhuvan University, Kirtipur in Partial fulfillments for the requirements of Master's Degree of Business Studies

Kathmandu, Nepal

February, 2022

Table of Contents

1 Background of the study

The art of selecting the right investment policy for the individuals in terms of minimum risk and maximum return is the portfolio management. It simply means holding of securities and investment in financial asset i.e. bond, stock. Diversification of financial asset is done while in financial asset while building appropriate portfolio. The combination of investment assets is portfolio (Weston and Brigham, 1992). The investment portfolios generation the income and capital preservation, considering the risks stemming from other asset and liabilities and those associated with institutional activities (Rose, 2003). A portfolio simply represents the practice among the investor of having their funds in more than one asset. An investment can be defined as the commitment of funds to one or more assets that will be held over some future period. It often refers to investing money in financial assets, such as certificates of deposit, bonds, common stocks, or mutual funds (Jones et al., 2009).

Portfolio management is concerned with efficient management of portfolio investment in financial assets, including shares, debenture, and bonds of companies/industries. Every investment entails some degree of risk, it requires at present certain sacrifice for a future uncertain benefits (Francis, 1998). Portfolio management of financial institutions assets mean allocation of fund to different components of financial institution having different degree of risk and varying rate of return in such way the main goal of financial institution is maximize the return and minimize the risk by selecting a portfolio of securities. Portfolio investments track the jeopardy of abrupt snag if the economic environment or the perspicacity of depositors alter, providing upsurge to fiscal and pecuniary catastrophes (Kargi, 2014) and (Busse & Hefeker, 2005). The securities on the long end provide relatively high interest income, as well as potential for capital gains in the event of falling interest rates, while the securities on the short end provide liquid assets to meet various demands for cash from the portfolio for bank needs (Bradley et al., 1975). Stability of the monetary market and situation impact financiers' portfolio investment verdicts and eventually portfolio investment drifts (Masoud & AbuSabha, 2014).

This study sought to establish the effect of size on the relationship between corporate diversification and performance of commercial banks in Nepal. Specifically, the study sought to; determine the effect of corporate diversification on performance of

commercial banks in Nepal and investigate the effect of performance on corporate diversification among commercial banks in Nepal. The findings of the study contribute to the pool of literature, which has over the years demonstrated that there exists a positive direct linear relationship between revenue diversification and financial performance. This study tries to decompose corporate diversification into interest income diversification, non-interest income diversification and branch diversification. On future research directions, there is a need to undertake a study on internal and external factors, which influence levels of diversification and financial performance among financial institutions across geographical locations, financial product lines and non-financial institutions while taking cognizance of the organizations' motives and ownership structures.

Banking institutions are in business to maximize investors' returns and profit. Because commercial banks act as intermediaries in the financial system, some studies in the sector are also underpinned by financial intermediation theory as proposed by Diamond (1984) which explains the role of banking systems as financial intermediaries. It must not invest its funds into speculative business man who may be bankrupt at once and who may earn millions in a minute. The bank should accept that type of securities which are commercial, durable, marketable stable, transferable and high market prices. A commercial bank can maximize its volume of wealth through maximization of return on their funds' investments and lending. So, they must invest their funds where they gain maximum profit. The profit of commercial banks mainly depends on the interest rate volume, tenure of loan and nature of investment in different securities while investing excess funds in different securities or at the bank in different securities. While investing excess funds in different securities or at the lending period, the banks should keep in mind that the people deposit money at the bank in different account with confidence that the bank will repay their money on demand. Similarly, a bank should not lay all its eggs on the same basket i.e., to minimize risk, a bank must diversify its investment on different sectors. Diversification of loan or investment helps to sustain loss according to the law of average because if securities of a company deprived, there may be appreciation in the securities of other companies.

2 Problem Statement

Agency theory of Jensen & Meckling (1976) suggested that divorce of ownership and control in a firm often leads to conflict of interests between agents or managers and their principals who are shareholders of the organization. Bank managers, as agents, are involved in decisions on which loan products to invest in and the type of product innovations to undertake in order to maximize returns for their principals, the shareholders. Corporate diversification remains a central research topic with innumerable studies exploring its association with firm performance (Wernerfelt & Chatterjee, 1991, Palich, Cardinal and Miller, 2000). Flamini and McDonald (2009) illustrated that diversification explain performance levels variations. Ali, Haider Hashmi and Mehmood (2016) summarized that literature document mixed results on the relationships between diversification and performance as ranging from linear, U-shaped or inverted U-shaped relationships. Bhatia and Thakur (2018) for instance documented a strong bidirectional relation between performance and diversification. The diversification extent was directly interrelated with corporate profitability, thus an indication that well diversified companies experience a substantial diversification premium. Further, total diversification had a positive effect on performance, suggesting that high performance brings about greater diversification. Benito-Osorio, Guerras-Martín and Zúñiga-Vicente (2012), Palich et al. (2000), Park and Jang (2013), Zahavi and Lavie (2013) and Zhou (2011) clarified that the research stream examining the diversification, size and performance relationships cannot be described as mature due to lack of an empirically shaped consensus.

A bidirectional link exists between corporate diversification and company performance as presented by Bhatia and Thakur (2018). Lien and Li (2013) put forward that diversification is a commonly employed approach for developing a company's market share, leading to increased revenue and profitability. According to He (2012), good company performance allows the adoption of various diversification approaches. Erdorf, Hartmann-Wendels, Heinrichs and Matz (2013) and Shyu and Chen (2009) opined that a simultaneous correlation exists between diversification strategies and corporate performance. These studies suggest that the level of diversification is endogenous to the company's profitability and similarly, enterprise performance is endogenous to the corporate diversification. Globally, Dimitrios and

Mike (2016), Psillaki and Mamatzakis (2017) and Gololo (2018), observed that worldwide, the banking industry has encountered various difficulties which has led interest income destabilization. In particular, the industry continues to face growing problem loans, competition from non-banks and unprecedented financial technology growth. In response to these challenges, Mohamed and Bett (2018) and Ferrari, Masetti and Ren (2018) explaind that in the last three decades, banking institutions have extended their sources of revenue by undertaking non-interest revenue producing activities also called nontraditional activities, like shares brokerage as well as underwriting, to supplement the declining interest revenues. Flamini, Valentina, McDonald and Liliana (2009) and Slocombe (2017) illustrate that sub-Saharan Africa (SSA) banking entities make more profits compared to the others across the globe. Kiweu (2012) noted that higher levels of bank profitability are a concern for public furor though Ndungu and Muturi (2019) observed that over the years, in Kenya, diversification has been viewed as important in improving commercial banks financial performance. Teimet, Lishenga, Iraya and Ochieng (2020) posit that the Kenyan-banking sector has experienced numerous regulations that have affected diversification activities, financial performance and size of the corporations over the years.

Mazur and Zhang (2015) identified adverse implications of diversification on performance. Stulz (1990) illustrated that diversification exacerbates agency conflicts between small shareholders and corporate insiders. Saoussen and Dominique (2011) illustrated that diversification performance relationship is nonlinear with risk, and not significantly uniform across business lines and among banks. A strand of studies has examined the difference between related and unrelated diversification with no consensus. Christensen and Montgomery (1981), Palepu (1985), Rumelt (1974 and 1982) and Tanriverdi and Venkatraman (2005) argued that related diversification can improve performance. Markides and Williamson (1994) observed that unrelated diversification could compromise performance. Inferring from the contradictory findings globally and with some studies indicating a dual causality relationship between corporate diversification and performance, it is deduced that empirical studies are yet to conclusively address the following research questions.

i. What is the portfolio investment managed by the commercial banks of Nepal?
ii. What is the performance of portfolio management of commercial banks of Nepal?
iii. How does the investment portfolio choices affect the performance of commercial banks of Nepal?

3 Objectives of the study

The main objective of the study is to examine the portfolio investment management of the commercial banks of Nepal. This study is focused on investment decisions of banks on portfolio. The specific objectives of the study are as given below:

i. To assess the existing situation of portfolio management of Nepalese commercial banks.
ii. To measure the performance of portfolio management of commercial banks of Nepal.
iii. To examine the effect of the investment portfolio choices in the performance of commercial banks of Nepal.

4 Rationale of the study

The commercial banking sector of Nepal is expanding day by day. This study can be helpful to the companies to overview their portfolio management and to formulate future strategies to do much better in their horizon. Not only to the sampled banks, this study could also be beneficial to the other banks in the population as well. Further, the concerned scholars, academics, investors, professionals may also be benefited from this study. This study helps to inform the decision makers about the importance of portfolio management for their further success. The findings and recommendations of this research help the investor in making proper investment decisions. It also helps the financial managers to make important strategic decision on the debt- equity mix of the company. Academically, it makes a value addition for the researchers as it would serve as base of further research on capital structure and its determinants of the life insurance companies.

In Nepal, there are very little amount of researches and studies to go through regarding portfolio management and its influence on firm's performance in case of commercial banking sector. It is important for the financial managers to make

decisions regarding the investment or application or recruitment of the capital fund of or for the company as it determines the portfolio of the company.

The result of this study provides financial guidance to mangers, business consultants and investors with the necessary techniques of combining debt and equity and being able to maximize company performance. This study also fulfills the time period gap with previous studies of same aspect.

5 Limitations of the study

Every study is guided under certain limitation but the researcher has tried to include all the necessary information for the conduct of the study as far as possible. Following are some limitations under which this study has been conducted:

i. This study is fully based on secondary data.
ii. The time factor is the major limitation for this study has to be completed within a short span of time. The study has covered the data of past fiscal years from 2011/12 to 2020/21.
iii. The study only concerns portfolio management while doing the investment decision.

6. Literature review

Review of literature is the study of past research studies and relevant materials. It is an advancement of existing knowledge and in-depth study of subject matter. It starts with a search of a suitable topic and continues throughout the volumes of similar or related subjects. This is related to the present research adds new dimension to the study. It is an integral and mandatory process in research work. In this part, focus has been made on the conceptual framework and the review of literature that is relevant regarding to the portfolio management. In this regard, various books, journals and articles concerned to this topic have been reviewed. Review of literature is based on available literature in the field of research. Every possible effort has been made to grasp knowledge and information that is available from libraries, document collection center helps to take adequate feedback to broaden the information to study.

6.1 Review of literature

Portfolio is a collection of investment securities, for example, if you owned some of Prabhu Life Insurance Ltd. stock, some of Chandragiri Hills Ltd. stock, some of

Nepal Infrastructure Bank Ltd. stock, some of United Finance Ltd. stock, some of Nepal Liver Ltd. stock and some of Bottlers Nepal Ltd. stock you would be holding six stock portfolios. Portfolio analysis considers the determination of future risk and return in the holding various blends of individual securities. Investment portfolio is one which the income of profit of the banks depends upon directly. Hence, the banks should never invest its fund in those securities; difference may cause a great loss.

Nanda, Mahanty and Tiwari (2010) explored a data mining approach for classification of stocks into cluster is presented. After classification, the stocks should be selected from these groups for building a portfolio. It meets the criterion of minimizing the risk by diversification of a portfolio. The clustering approach categorizes stocks on certain investment criteria. They have used stock returns at different times along with their valuation ratios from the stocks of Bombay Stock Exchange for the fiscal year 2007-2008. Results of this analysis show that K-means cluster analysis builds the most compact clusters as compared to SOM and Fuzzy c-means for stock classification data. Then they select from the clusters to build a portfolio, minimizing portfolio risk and compare the returns with that of the benchmark index.

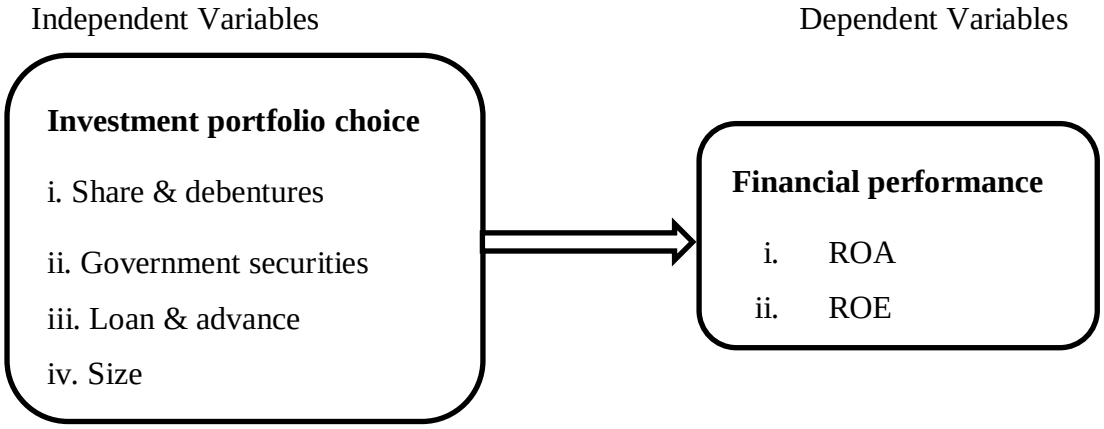
Orabi (2017) studied how investors select investments that will give them their required rate of return: they are mainly concerned with the performance alternatives. This study is mainly concerned with the performance of Jordanian Banks in their alternative investments in general and portfolio investment in particular. Study results revealed that banks of Jordan adhere to theories of formation of investment portfolios, in terms of diversification, trade-off between return and risk, and policy in the composition of the portfolios. The principle of convenience is applied to ensure the stability of the investor and the capital return. Study also pointed out that banks of Jordan adhere to the principle of diversification, and are committed to the principle of trade-off between risk and return and comply with the principles of the policy in the composition of the portfolio, and the principle of ensuring the stability of the investor and the capital return.

Mallick (2020) examined bank portfolio management under banking regulation and asymmetric information about borrower types and screening by banks and imperfect competition in the credit market. A bank tries to maximize expected profits subject to a portfolio variance constraint. The analysis yields the following results: For a monopoly bank, the incentive constraint of the efficient type of borrowers will be

binding and the participation constraint of the inefficient type of borrowers will be binding. Further, given the variance constraint being binding, the optimal portfolio will be on the efficiency frontier. The paper also examines duopoly; the optimal portfolio will be on the efficiency frontier. The paper also examines duopoly competition between aggressive (predator) and defensive (prey) banks and potential cooperation and reveals that among the alternatives of natural monopoly, entry deterrence, takeovers and efficient portfolio diversification through mergers or interest swaps, the cooperative efficient portfolio diversification strategy will dominate whenever portfolio returns are negatively correlated between any pair of interesting banks as it reduces portfolio variance for a given package of interest and loans i.e. Sensex.

6.2 Conceptual framework

Figure 1: Conceptual Framework for Impact of Investment portfolio choice on financial performance of commercial banks



Source: Impact of investment portfolio choice on financial performance of investment companies in Kenya (Kamwaro, 2013)

6.3 Research gap

The review of relevant literature, has contributed to enhance the fundamental understanding and knowledge. This is required to make this study meaningful and purposeful. There have been lots of article published related to investment portfolio management. Most of the researcher has done research on investment portfolio. However, they are mainly concerned with the rate of the return but they don't measure the relationship between investment and other variables. Hence, this study

will find out the real relationship between the investment with deposits, profitability, loan, and advance. Further, previous studies covered the data till FY 2020/21 hence there is gap in terms of time period in the research area and this study is designed to fulfill the gap created in terms of time period as well.

7. Research methodology

7.1 Research design

The primary objective of this study is to analyze the portfolio investment management of the commercial banks of Nepal. A researcher has collected the valuable data and suitable information relating to portfolio investment to achieve the objectives. This study is mainly based on descriptive and analytical research design.

7.2 Population and sample

Under the study of portfolio management of Nepalese commercial banks, the total number of commercial banks operating in Nepal was the population. At present, there are 27 commercial banks are operating in Nepal. All 27 commercial banks have been considered as the total population of the study. Out of them this study is concerned with three commercial banks as a sample. As Kothari (2004) recommends, a sample of 10% to 30% of the target population is a sufficient representation of the population. In line with this, the selected sample banks for the study are as follows:

i. Everest Bank Ltd. (EBL)
ii. Nepal Investment Bank Ltd. (NIBL)
iii. NMB Bank Ltd. (NMB)

7.3 Nature and sources of data

The secondary data has been used to achieve the main theme of the study. The main sources of the secondary are annual reports of the sample commercial banks. The major sources of secondary data are as follows:

i. NRB reports from 2011/12 to 2020/21
ii. Banking and Financial Statistics from 2011/12 to 2020/21
iii. Annual reports of sample banks from 2011/12 to 2020/21

7.4 Data collection and processing procedure

Essential financial data have been collected from different websites of the banks. Data used for the study has been collected through annual reports, NRB reports etc. The collected data has been processed as per the need of the study. These data have been grouped in different tables and figures according to their nature.

7.5 Data analysis tools and techniques

Data analysis is a process of inspecting, cleansing, transforming and modeling data with the goal of discovering useful information, information conclusion and supporting decision making. To get the solution of the objectives which are set in chapter one appropriate statically and financial tool are employed. In this study, data has been analyzed using the various statistical tools such as mean, standard deviation, coefficient of variation, regression analysis and various financial tools such as ROI, ROA, ROE, etc.

8. Chapter plan

The study will be organized into following different chapters:

Chapter I: Introduction

This chapter will include the background of the study, statement of problem, objectives of the study, significance of the study and limitation of the study.

Chapter II: Literature Review

This chapter will introduce the conceptual framework, review of available literature and research gap.

Chapter III: Research Methodology

This chapter will include the research methodology. It will deal with research design, population and sample, sources of data, data collection and processing procedure and data analysis tools.

Chapter IV: Results and Discussion

This chapter will concern with data presentation and analysis. This is the core part of the study. Collected data will be presented in the tabular and other forms. Different statistical presentations will be used for analysis the collected data by using different

financial and statistical tools and techniques. It will also include the findings of the study and discussion.

Chapter V: Summary and Conclusion

It includes the summary of the study, conclusion and implication.

REFERENCE

Bhatia, A., & Thakur, A. (2018). Corporate diversification and firm performance: an empirical investigation of causality. *International Journal of Organizational Analysis*.57(4),78-92

Chatterjee, S., & Wernerfelt, B. (1991). The link between resources and type of diversification: Theory and evidence. *Strategic management journal*, *12*(1), 33-48.

Cheney, J. M., & Moses, E. A. (1992). *Fundamentals of investments*. 10th edition, New York: West Publishing Company.

Chency,J m., & Mosses, E.A. (1995). *Fundamental of investment*. St. Paul: West publication Company.

Christensen, H. K., & Montgomery, C. A. (1981). Corporate economic performance: Diversification strategy versus market structure. *Strategic Management Journal*, *2*(4), 327-343.

Gitman, L. J. (2009). *Introduction to managerial finance*. New York. Prentice Hall, a division of Pearson Education, Inc.

Gololo, I. A. (2018). Challenges of the Nigerian Banking Sector and the Way Forward. *American Finance & Banking Review*, *3*(1), 26-34.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, *3*(4), 305-360.

Kamwaro, E. K. (2013). *The impact of investment portfolio choice on financial performance of investment companies in Kenya* (Doctoral dissertation, University of Nairobi).

Kiweu, J. M. (2012). Income diversification in the banking sector and earnings volatility: evidence from Kenyan commercial banks. *European Scientific Journal*, *8*(7), 128-148.

Markides, C. C., & Williamson, P. J. (1994). Related diversification, core competences and corporate performance. *Strategic management journal*, *15*(S2), 149-165.

Mazur, M., & Zhang, S. (2015). Diversification discount over the long run: New perspectives. *Finance Research Letters*, *15*, 93-98.

Nanda, S. R., Mahanty, B., & Tiwari, M. K. (2010). Clustering Indian stock market data for portfolio management. *Expert Systems with Applications*, *37*(12), 8793-8798.

Ndungu, J. G., & Muturi, W. (2019). Effect of Diversification on Financial Performance of Commercial Banks in Kenya. *International journal of current aspects*, *3*(V), 267-285.

Palepu, K. (1985). Diversification strategy, profit performance and the entropy measure. *Strategic management journal*, *6*(3), 239-255.

Rose, A. M., & Rose, J. M. (2003, September). The effects of fraud risk assessments and a risk analysis decision aid on auditors' evaluation of evidence and judgment. *In Accounting Forum*, 312-338.