PORTFOLIO MANAGEMENT AND PROFITABILITY OF DEVELOPMENT BANKS IN NEPAL

A Dissertation Submitted to the Office of the Dean, Faculty of Management in Partial Fulfillment of the Requirements for the Masters of Business Studies

by

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CERTIFICATE OF AUTHORSHIP

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled **"Portfolio Management and Profitability of Development Banks in Nepal"**. The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor it has been proposed and presented as part of requirements for any other academic purposes. The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of this dissertation.

.....

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Date:

REPORT OF RESEARCH COMMITTEE

Ms. Ananta Kumari Darlami has defended research proposal entitled "**Portfolio Management and Profitability of Development Banks in Nepal"** successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestions and guidance of supervisor Asso. Prof. Pitamber Lamichhane and submit the thesis for evaluation and viva voce examination.

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APPROVAL SHEET

We, the undersigned, have examined the dissertation entitled "**Portfolio Management and Profitability of Development Banks in Nepal"** presented by Ananta Kumari Darlami a candidate for the degree of Master of Business Studies (MBS Semester) and conducted the viva voce examination of the candidate. We hereby certify that the dissertation is worthy of acceptance.

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Perfection is anything can hardly be thought of knowing the universal fact "Human is Error", I have taken utmost care to avoid errors, but I know they are inescapable, so I shall be obliged if they are forgiven.

Ananta Kumari Darlami

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ABBREVIATIONS

BFIs : Bank and Financial Institutions

NRB : Nepal Rastra Bank

NPAs : Non-Performing Assets

NPLs : Non-Performing Loans

SPSS : Statistical Package of Social Science

NEPSE : Nepal Stock Exchange

SEBON : Security Board of Nepal

ROA : Return on Assets

S.D. : Standard Deviation

C.V. : Coefficient of Variance

DEA : Data Envelopment Analysis

PPM : Product Portfolio Management

ROE : Return on Equity

NAPS : Net Assets per Share

NIM : Net Interest Margin

DMBs : Deposit Money Banks

GMM : Generalized Method Moments

ABSTRACT

This study investigates the relationship between portfolio management and the profitability of development banks in Nepal, with a focus on how effective asset management practices can influence financial performance. Employing a descriptive research methodology, the study analyzes secondary data sourced from the annual reports and financial statements of selected development banks over a ten-year period. The findings reveal a significant positive correlation between investments in government securities and return on assets (ROA), suggesting that strategic allocation to these low-risk instruments is instrumental in enhancing profitability. Conversely, the research uncovers a strong inverse relationship between non-performing loans (NPLs) and ROA, underscoring the critical need for robust credit risk management practices to mitigate the adverse effects of high NPLs on financial performance. Additionally, the study assesses the impact of loans and advances, shares and debentures, and due from other financial institutions on profitability, indicating that while loans are essential for generating income, their management must be approached with caution to prevent excessive NPLs that could jeopardize financial health. The research emphasizes the necessity of diversification in investment portfolios as a strategic approach to managing risks associated with economic fluctuations and sector-specific downturns. Furthermore, it addresses the various challenges faced by development banks, including regulatory constraints and limited access to capital markets, which necessitate a proactive and adaptive approach to portfolio management. Overall, the findings of this study provide valuable insights into the significance of effective portfolio management practices in enhancing the profitability and stability of development banks in Nepal, ultimately contributing to the broader economic development of the country. The study serves as a foundation for further research in this area, encouraging ongoing exploration of effective portfolio management strategies within the context of Nepal's dynamic banking sector, and highlights the importance of strategic investment practices that prioritize risk management and diversification to foster long-term profitability and resilience in the face of economic challenges.

Keywords: Portfolio Management, Profitability and Financial Performance

CHAPTER–I

INTRODUCTION

1.1 Background of the Study

A portfolio consists of a collection of assets; in that, it involves retaining securities and investing in assets, including fixed-income securities or the stock portfolio/gearing related to productive portfolio investment in financial assets. It reduces unsystematic risk without a significant loss of return. So as to expand our view of risk and return from that of a portfolio.

Portfolio Management deals with the efficient management of portfolio investment in financial assets like shares and debentures of companies. Portfolio management is so closely and directly related to the impact of a particular decision that, in all cases, we cannot ensure its correctness. Portfolio analysis works to create those portfolios that will yield the highest return, whatever that risk correspond may be, in line with that which the investor appears to reasonably do. What makes it an 'investment' is that the spending is diverted by the allocation of the funds in such a way that somehow locks up the researchers for future use as opposed to earlier consumption. An attractive investment policy holds in its fold both borrowers and lenders that work towards making the investment operation of banks profitable and risk-minimized (Weston and Brigham 2003).

A portfolio is used in the sense of arrangement of different securities or a collection of securities. A portfolio maximizes expected return according to a given level of risk. A portfolio shows the practice among investors to diversify investments in a number of assets. The sound formulation and implementation of an investment policy is basically the prerequisite for optimal performances of banks. A sound investment policy, in turn, has a bearing on the economic development of the country while generating profits for the bank. An ideal investment policy would charm every lender and borrower, while this truly ensures that the operation of the bank thus becomes efficient and profitable by minimizing internal risk. M&E refers to a consultative medium through which the Commercial banks assess the resource mobilization pattern of different sectors into productive use. A direct form for reducing bank risk on income or profit is through portfolio investment, which means diversifying the investments into sectors. Through

portfolio investments, risks across diverse sectors are minimized and narrowed down. Portfolio analysis deals with interpreting the risk and return rate, accounting for various combinations of individual securities (Weston and Brigham 2003).

An investment in any fund is made with the intention of earning some positive rate of return. Nobody is willing to take a risk if that risk has no expected return; but if the investor expects a higher return, he/she must be willing to take higher risks. Portfolio selection is one way to minimize the risk given a certain yield. A portfolio may be defined as a collection of financial assets brought together to achieve a specific set of investment goals. Investment positions are entered for the purpose of expecting a return. Investors want to minimize the deviation of actual return from expected return as much as possible. It is a good example of how diversification is the only way to efficient investing as it will reduce the variability of returns around the expected return (Francis, 2003).

Portfolio management essentially deals with handling the investments in the financial assets of a portfolio, which are stocks and bonds of companies. It can involve professionals, random assistants, or individuals themselves. The portfolio of an individual or institution consists of securities held in investment in financial assets. The differences in the level of holdings stem directly from individuals' friends and decisions on the basis of risk and return. The processes of portfolio decision making are closely tied in and intertwined with related of decision making, and there is no certitude about the accuracy of this process at all times (Jaiswal, 2012).

The bank’s investment strategy is meticulously designed to foster national economic development. By strategically crafting its investment portfolio and executing coordinated planning, the bank drives economic growth forward. Banks are integral to capital formation, channeling funds from various sectors essential for industrial progress. A robust banking system is fundamental for facilitating economic activities, with bank services expanding market reach (Brigham & Houston, 2013).

Modern banking history of Nepal began from the establishment of Nepal Bank ltd. in 1937. Nepal Rastra Bank was established in 1956 as a central bank of a country. According to, Bank and financial ordinance 2006, "Bank and financial institutions can be merged in one another," commercial banks are increasing day by day in Nepal. There are 17 development banks in Nepal.

The main focus of the study revolves around examining the relationship between effective asset allocation strategies and the financial performance of the development. This study aims to analyze how development banks manage their investment portfolios to balance risk and return, optimize resource utilization, and ensure financial stability in Nepal's dynamic economic and regulatory environment. It explores the impact of credit risk management, diversification of investment, and compliance with central bank regulations on the banks' profitability. Additionally, the study seeks to identify challenges faced by development banks, such as non-performing assets (NPAs) and market volatility, and how strategic portfolio management can mitigate these issues. Ultimately, it highlights the significance of robust portfolio practices in fostering sustainable growth and competitiveness in Nepal's banking sector.

1.2 Problem Statement

Banks serve as the foundation of every economy, thereby influencing the economic trajectory of any country through their successes and failures. In Nepal, development banks predominantly focus their investments on loans and advances, which can pose risks during economic downturns, potentially leading to widespread bank failures. A common issue lies in the limited investment practices of these development banks, often favoring similar types of investments. Many banks allocate significant funds to unproductive sectors such as real estate, hindering overall economic progress despite advancements in the banking sector.

The challenges faced by present banks within a competitive environment noted for rapid changes and uncertainties. It also expresses the need for banks to proceed with dynamic strategic planning by clearly defining their mission and formulating various strategies along with setting up specific objectives and goals. The changing competitive scenario combined with internal and external factors makes it obligatory for banks to diversify their investments in different asset kinds and hold contingent types of liabilities. In addition, the statement emphasizes risk assessment and management as very significant in the survival and success of the bank. The purpose of research is to develop practical guidelines for successful bank investment strategies in uncertain conditions, including the most profitable portfolio structures in variable-interest-rate environments, the products banks should offer, and the implementation of risk management practices by successful bank (Hamzaee, 2006).

The critical challenge of managing credit risk within Nepalese commercial banks, emphasizing that effective loan portfolio management is essential for mitigating this risk. The research highlights that the credit operations of banks significantly influence their credit portfolio management practices. It aims to investigate the current status of these practices, the techniques employed by banks, and the factors that affect loan portfolio management. The study seeks to provide insights into the concentration of loans across different sectors and the overall impact on the banks' performance, thereby identifying potential areas for improvement in credit risk management strategies (Malla, 2017).

Portfolio management has a huge practical and significant influence on the financial performance; it has received insufficient academic attention. Portfolio management is very important for the management of business portfolios so as to attain higher value. The banking industry has been met with a range of problems from rising non-performing loans and liquidity issues to ineffective portfolio management. It reveals the necessity for further exploration of how well-executed portfolio management can be beneficial in financial performance within the banking sectors. The management of assets has been a tricky and often thorny issue for the overall performance (Mpuwire, 2018).

The research revolves around the important question of portfolio management versus the profitability of Ghanaian commercial banks. The study notes that this problem is alarming from the fact that Ghana had recorded the suspension of 435 banks and deposit-taking institutions in the period between 2017 and 2019 as a result of poor corporate governance, liquidity issues, and high default risks. The research stresses the need for banks to properly manage their asset portfolios (consisting of government securities, shares in other companies, and loans from other financial institutions) in order to improve profitability. The authors observe some limited empirical studies have been carried out to the extent that they have investigated the effects of portfolio management on the profitability of banks in context to Ghanaian commercial banks. That raises the point that in-depth research is required on strategic portfolio management that will forestall risks and improve performance within the banking sector (Agblobi, 2020).

Problems are identified that affect portfolio management in regard to the profitability of commercial banks in Kenya. A clear understanding of how many factors such as liquidity, financial assets, tenor, deposit mix, and sector concentration impact bank profitability has not

been developed. Some banks have consolidated their financial statements, presenting information at the group level. That is, the specific impacts of portfolio management on the performance of the respective banks are obscured. The above-mentioned lack of clarification is a hindrance to decision-making and formulation of strategies. In addition, while portfolio management can explain a good deal of the variation in profitability, almost 37% thereof is un-accounted for, demanding more insights into other influencing factors. Thus, all of these point to improvements in portfolio management themselves and increased transparency in financial reporting in the banking sector of Kenya (Ngari, 2018).

The paper discusses various issues associated with portfolio diversification and its relationship with the financial performance of commercial banks in Kenya. Besides, there is disagreement in the literature that has analyzed the relationship between diversification and performance: Some establish a significant correlation, while others do not point to such a correlation. There are additional methodological considerations and other generalizability limitations consideration in the work done to date, which tends to lead to a conclusion based on uncertainties and not on precision. Many other studies are particularly concerned with loan portfolios while ignoring investment portfolios, which capture other important aspects of overall bank performance. Furthermore, with the liberalization of the banking sector, diversification pursues non-traditional activities. However, income derived from non-traditional investments is declining, and doubts are raised as to the effectiveness of diversification. Taken together, these issues point to a need for a detailed study of the impacts of portfolio diversification on financial performance for banks operating (Muthui, 2019).

The systemic risk in the financial system, particularly stemming from financial fire sales by banks following financial crisis. Policymakers are focused on understanding how large volume of asset sales, combined with sharp market price declines, can weaken financial institutions during distress. The aims to develop structural model of financial asset fire sales to provide theoretical insights and enable regulators to quantify and monitor associated risks using publicly available balance sheet data (Rosen & Zhong, 2022).

Nepalese Development Banks are faced with a number of challenges in portfolio management, given the dreadful dynamics and uncertain nature of such an economic environment. Credit concentration is specifically alarming in sectors, such as real estate, construction, and

hydropower, which present them with an increased risk of sector-specific downturns. While considerable successes have been achieved toward portfolio diversification, limited viable investment in underdeveloped sectors or regions is seriously weakening affirmative action to reinforce the balance of portfolios. Even worse, limited resort to mastering sophisticated tools to handle risk assessment, along with a general shortfall of skilled and experienced human resources for risk management, are impediments to efficient risk management. They are also under a heavy burden of considerable non-performing loans (NPLs) arising from poor credit appraisal systems, lax monitoring of borrowers, and inability to decide on suitable actions to recover the amounts lent. The various regulations propounded by Nepal Rastra Bank about the maintenance of capital adequacy ratios and provisions against risky loans further constrict developmental banks in managing their lending portfolios more courageously as they otherwise would have desired. Economic uncertainties, political instability, inconsistent government policies-in short, the increasing complexity in portfolio management-make it difficult for development banks to manage their portfolios in a way that ensures their investments are aligned with long-term economic growth and yet still allow financial sustainability.

Furthermore, development banks in Nepal face several challenges in portfolio management that directly impact their profitability. One of the primary issues is the high prevalence of non-performing assets (NPAs), which arises from inadequate risk assessment and monitoring of loans. Limited diversification in their investment portfolios further exposes these banks to sector-specific risks, particularly in agriculture, real estate, and small enterprises, which are highly vulnerable to economic fluctuations. Additionally, regulatory constraints imposed by the Nepal Rastra Bank (NRB) often limit the flexibility of portfolio strategies, affecting profitability. The lack of advanced financial tools and expertise for efficient asset allocation compounds these challenges, making it difficult for development banks to achieve optimal returns. Furthermore, competition within the banking sector and limited access to robust capital markets hinder their ability to expand and sustain profits. These problems underscore the need for effective portfolio management practices to enhance financial performance and resilience in Nepal's development banking sector.

The primary challenge remains the inadequate investment environment, where funds are sometimes misallocated without thorough analysis of financial, business, and other risks.

Effective portfolio analysis among different investment types is crucial for Nepalese development banks to mitigate risks by diversifying their investments across various sectors. This strategic approach is pivotal in optimizing investment portfolios and contributing to sustainable economic growth. Therefore, the various problems which are discussed in the research are given below:

- Is there any relationship between portfolio management and profitability of sample development banks in Nepal?
- What is the impact of holding government securities on profitability of sample development banks in Nepal?
- What is the effect of loan and advance, shares and debenture, and due from other financial institution on profitability of sample development banks in Nepal?

1.3 Objectives of the Study

The primary aim of this study is to examine how effective asset management practices influence their profitability of development banks in Nepal. The focus is on understanding the strategies these banks adopt to optimize their investment portfolios and achieve expected return in a complex economic environment. The major objectives of the study have been given below:

- To examine the relationship between portfolio management and profitability of sample development banks in Nepal.
- To analyze the impact of holding government securities on profitability of sample development banks in Nepal.
- To analyze the effect of loan and advance, shares and debentures, and due from other financial institution on profitability of sample development banks in Nepal.

1.4 Rationale of the Study

In the context of developing country like Nepal, development banks play a vital role in stabilizing the national economy and growth by performing various financial activities like generating employment and fund, investing in industrial and other sectors. The study is to understand how development banks manage their investments and how it affects their earnings. Development banks play a key role in supporting Nepal's economy by funding important sectors like agriculture, small businesses, and infrastructure. However, they face challenges like bad

loans and limited options to invest. This study helps to explore whether their methods of managing money and risks are effective in making profits while supporting economic growth. By analyzing these factors, the study aims to provide useful ideas to improve their financial performance and ensure they remain strong and beneficial for the country.

Therefore, the study helps understand how these banks handle their investments and risks to earn profits. Development banks are essential for funding key sectors like farming, small businesses, and infrastructure, which are vital for Nepal's growth. By analyzing their financial strategies, the study can highlight ways to reduce losses, improve earnings, and ensure the banks remain strong and sustainable. This understanding is crucial for improving their performance, supporting the economy, and meeting the needs of communities across the country.

1.5 Limitations of the Study

In the Nepalese context, the primary challenge for research studies lies in the adequacy of data and information, with significant room for debate regarding their accuracy and reliability. Every study faces limitations stemming from various institutional factors, the duration of the study, the reliability of statistical data, methodologies employed, and variability in tools. This study will be conducted facing the various limitations which are given below:

- The research has limited itself to five development banks; hence this may not reflect the study population entirely.
- The research obtains secondary data from articles, the annual banking report, and the relevant organization websites.
- The study is confined to the factors related to portfolio management and profitability.
- The study covered only data relevant to the last 10 years-from FY 2013/14 to FY 2022/23.

CHAPTER -II

LITERATURE REVIEW

2.1 Introduction

Portfolio management is the process of selecting a mix of securities that offers the investing organization the maximum field for a given level of risk, or alternatively provides the minimum risk for a given level of return. It can also be termed as risk and return management. Inside this chapter, there is a descriptively detailed look at wonderful pieces of work involving portfolio management and profitability. Many different books, journals, articles, and some past dissertation studies have been reviewed for this study. This research work draws on literature dispersed across a number of books because of the apparent lack of sufficient material relating to portfolio management and profitability. Investment is not gambling; rather, it is a scientific system by which surplus funds yield maximum profit with minimum risk. The most common dictionary definition of investment is sacrifice of something we value now for something we will value in the future. Involvement in making investment demands that a whole collection of information be assembled on the market circumstances influencing the asset, its risks and return aspects, other market opportunities open to investors, interest rates offered by banks, governmental policies or possible changes therein, taxes, laws, regulations, and investors' attitudes. Investment refers to risk and return management.

2.2 Theoretical Review

Portfolio management is the process of dumping into a bundle a number of securities in order to give an investing organization its maximum payoff against a reasonable degree of risk or a minimum degree of the same risk contingent upon a predetermined level of return. It seeks to establish an optimal mix of assets that yields the maximum at a specific risk level. Portfolio management of bank assets means basically allocation of funds to different components of banking assets and the others, in which utilization of such factors as availability of funds, liquidity requirement, Central Bank policy, etc. should be made. While determining Portfolio could be worked upon on the macroeconomic environment, that particular indicator such as inflation rate, national income, the savings ratio, and the like should be continually monitored. The total bank assets can be classified, due to working requirements, and consists of:

- Investments

- Loans and Advances

Basically, this is what was introduced originally by Harry Markowitz for articulating the Portfolio Theory in 1952. It allows optimal selection of a portfolio, which an investor averse to risk is willing to consider. Simply put, according to the risk aversion concepts of the investor, risk-averse investors choose between different portfolios that will render maximum expected return for a given level of risk or will minimize risk given a level of expected return. Such investors are concerned only with efficient portfolios. Portfolio theory can be applied to identify combinations of these securities that yield efficient portfolios. The combination of these securities should create a set of efficient portfolios. The selection of a portfolio thus depends upon the investor's attitude towards risk and return.

Portfolio investment takes place through the combination of various kinds of single assets. Modern portfolio theory investigates the relationship of assets with respect to return risk. Mechanisms of this theory involve measuring the effect an asset has on the risk and return of a portfolio. Portfolio investment involves very few variables that investors care about: return and variance. Consequently, a rational investor would prefer the maximum mean return permissible for any given level of risk or the minimum level of risk for the given return. The portfolio considered from this principle would be the so-called efficient portfolios. Efficiency portfolios are governed not only by the risk and return of the individual assets included in constructing them, but also by the way these assets interact with one another with regard to total portfolio risk and return. The portfolio itself is actually just a plain weight average of the return of the individual asset components, while the risk is not a weighted average of the variance of returns of the individual assets. Risk associated with the portfolio interacts with variance of return, with respect to the covariance between the returns on individual assets included in the portfolio and their weights. The portfolio analysis basically determines the future risk and return over holdings, and their respective combinations to generate the future expected return. While portfolio return may be expressed as the weighted mean of individual securities, portfolio variance is completely different and may be one less than a weighted average of the variances of the securities. This thus allows the investor to reduce the risk of the portfolio by including an additional security with a substantially higher degree of individual risk than the others in the

portfolio. The seeming paradox arises because risk varies enormously with the covariance among the returns of individual securities. Portfolio management is done by human beings or financial institutions, with the view of maximizing the returns from a given investment portfolio. The manager would constantly balance between the parameters of a good investment: security, liquidity, and returns. The main aim is to maximize the clients' return from the managed portfolio.

2.2.1 Investment

Investment is defined by Sharpe et al (2003) as the relinquishing of current dollars in exchange for future dollars. They have also stated that investing time and taking risk are investments too. If you invest present dollars, you may still incur some sacrifices, and if it is in the future, those sacrifices continue. These are termed "delayed rewards". If applied, that reward may come much later, and if it comes, the amount of that reward is usually not known. As Shrestha et al (2000) describe, investment is our idle savings applied to something which is expected to give returns. Investment brings to mind images of profit, risk, speculation, and wealth, according to Cheney and Moses (1992). Investment alternatives are classified according to the required rate of returns, risk aversion, tax implications, time-frame for investment, and investment strategies as some consideration for selection of investment alternatives.

While on one hand, one can draw a distinction between real investment and financial investment, on the other hand, real investments are lands, machinery, or factories, which are tangible assets, and financial investments are common stocks, bonds, and other such similar pieces of paper contracts (Sharpe, 2003). They also discussed the aspect of internationalized investment and stated that an increasing number of foreign security markets represent great international possibilities to American investors. They presented a comparative study of the market capitalization of the stock markets of 1970 and 1996, clearly elucidating that compared to the total share that the United States common stocks represented to the world market, this had decreased in a span of 25 years, totaling down to almost half, i.e., 45% in 1996.

2.2.2 Investment Process

Investment the investment process is a description of what a person should do in order to take wise investment decisions; how to invest in marketable securities, how can investment be broadened, and when

the investment should be done. A five steps procedure for making these decisions forms the bases of the investment process are as follows.

1. **Investment Policy:** It pinpoints an investor's needs and, consequently, the extent of the investor's own wealth and nominally indicates investment objectives from risk and return perspectives.
2. **Security Analysis:** It includes a study of various individual securities and groups of securities with the larger categories of financial assets just mentioned.
3. **Portfolio Construction:** A third step in the investment process, the construction of the portfolio involves deciding what particular assets to invest in and exactly how much of the overall wealth should be invested in each asset. The problems of selectivity, timing, and diversification to be reconciled by the investor occur in this stage.
4. **Portfolio Revision:** It refers to the periodic repetition of the above three steps. That is, over time, the investor may accurately change his or her investment objectives, thereby reducing the current portfolio to sub-optimal proportions.
5. **Portfolio Performance:** It is periodic evaluation of how the portfolio has performed, just not in terms of return that the portfolio earned but also in terms of the risk the investor has undergone.

2.2.3 Investment Alternatives

An individual investor, in very many avenues, has to pick an investment alternative. Investment alternatives generally are classified into two categories: financial asset alternatives and real asset alternatives. Financial asset alternatives are common stocks, preferred stocks, bonds, convertible, warrants, options, rights, futures, etc. Real asset alternatives are real estates, precious metals, and collectibles. Given the different investment alternatives, each investor has an objective in their mind to enhance invest gain depending on their perceptions and choices toward particular securities (Cheney & Moses, 1995).

2.2.4 Return

Return is value for making an investment. History returned maps an investor's assessment of an expected return for the future or an unknown return. Expected return referred to as an ex-ante return and such predicted return may or may not occur. Fisher and Jordan9200 have put forth some component descriptions of the return. They explained returns as a combination of periodic cash payments and price changes of assets. Return can be positive or negative. Cheney and Moses (1992) have defined return on a single-period basis. They refer to the rate of return which is held against the initial amount invested. Brealey and Myers (2000) have explained the return

as a sum of cash payments received due to ownership plus price appreciation divided by beginning price, which is a single-period measure of return. Cheney and Moses (1995), further discuss the calculation of the expected return in terms of both the arithmetic and geometric means. The geometric mean return approximates the expected growth rate, assuming reinvestment of the income during the holding period. Given the unfairness of the arithmetic mean, the geometric mean can only ever be lower than or equal to the arithmetic mean. When the holding-period returns are constant along the investment horizon, only then will both the arithmetic and geometric means become equal. Van Horne and Wachowicz (2000) are also in consent but, further, have defined it as a tool for returns between one year or less. For the long term, it is better to compute it as an investment yield. A yield is based on present value and therefore, takes into account the time value of money. Further, return for the future can be determined from the probabilities of different phases of the economy, said prosperity, recession, depression and recovery.

Kandel (2018) has analyzed the risk and return on common stock investment of Nepalese stock market and it is related to common stock of two commercial banks listed in Nepal stock exchange Limited. Investors have varying perception towards risk and enterprising activities. They invest in those opportunities which have certain degree of risk associated with it. This research study found that there is a positive relationship between risk and return. Most of the investors are risk averter. It suggests to construct appropriate portfolio instead of investment in a single security which would be able to reduce unsystematic or diversifiable risk. The secondary data collected from NEPSE website (www.nepalstock.com), previous studies, NRB publications and publication of selected commercial banks, website of security board of Nepal (SEBO), Journals and internet. Scientific methods have been used to analyze both quantitative and qualitative analysis. After analyzing the risk and return of sample bank and based on past data of their last five fiscal years i.e. (FY-2012/13 to FY-2016/17) it is concluded that all the commercial banks are very much risky with fluctuated rate of return. From the findings of beta coefficient of each sample bank, the C.S. of NABIL is seeming very much volatile than NIBL stock. It was also found that both the selected banks have a high unsystematic risk proportion.

1) **Return on Investment**

One person's return may have a different meaning from another's. Certain ultra-competitive investors might be swayed more by quickly realized cash inflow and may see lesser value in distant returns. Returns may be cash dividends or capital gain or loss. Non in the financial course use that slightly odd ratio-based measures. Single holding period return may also be defined as total future cash flows that may be earned during the holding period in the securities held until the holding period. It may also be defined in percentage terms as a share of all the changes in value and any cash distributions for the period divided by the value of the investment at the beginning of the period. The investor can earn from two categories of incomes from shareholding or bonds:

- Income accrued from price depreciation or price appreciation. It has capital gains and losses as income accrued.
- Income from cash flows: cash dividends or coupon interest payments.

The return acts as a measure of the financial position of any Organization. An organization may enjoy the good status of a company, given a higher return. Returns are rewards to an investor from his or her organization. General return must always be maximized according to the risk that the investor deems appropriate. Return is a motivational force and the overall way of comparing all investment alternatives in the eyes of the investor. Realized and expected rates of return are two common terms that are constantly used in the field of investments. The realized rate of return is quote-unquote direction after things occur and thus has already been earned or is collectable-as per its historical return.

Rate of return of investment is expressed as the sum of all gains and losses made by the owner. It is commonly stated as the change in value plus any cash distribution expressed as percentage of the beginning period investment value. The expression for calculating the rate of return (Ks) earned any assets over the period (t) is commonly defined as:

Total Return = Capital Gain + Regular Gain (Ordinary Gain) Capital Gain = Ending Price - Beginning Price

Regular Gain = Dividend or Interest

a. Single Period Rate of Return

Returns on investment can be defined as the gross increase in investment value after taxes. It can increase either in cash, which is received by the investor, or through an increase in market value with respect to the original purchase price. The holding-period return, or HPR, is computed as:

Ending Price - Beginning Price + Cash Receipt

HPR = Beginning Price

b. Required Rate of Return

An investor must consider the real rate of return, expected inflation, and risk when calculating the required rate of return on investment. As consumption is put off today, therefore, an investor is entitled to a rate of return that compensates for this deferred consumption since an investor expects to receive real enhancement in goods purchase later, and assuming for the moment, zero inflation and no risk, required rate could be equal to the real rate of return, which represents pure time value of money. This real is determined by the capital markets based on the supply of money available for investment, relative to the demand for borrowed money (Cheney and Moses, 1995).

The required rate of return, therefore, is the lowest anticipated return from an investment a risky investor can reasonably expect. In general, it is a function of the real rate of return as well as risk. The required rate of return is the risk-free asset return.

C. Expected Rate of Return

If you want to make an investment, then the expected return or the expected holding-period return of that investment must be equal to or greater than the required return for that investment. This projected rate of return is dependent on the receipt of cash inflows through dividends or interest over the holding period, as well as the expected resale price or selling price. The expected rate of return is the unknown future rate of return. The investor is predicting possible outcomes based on possible states of the economy. Each state of the economy produces a different expected rate of return. Each outcome is assigned subjective probabilities (Cheney & Moses, 1995).

2.2.5 Risk on Investment

Risk, in simple terms, is an uncertainty. To a common stock holder, risk and uncertainty are a part of life. Technically, both terms have different meanings. In simple words, risk, in investment parlance, refers to the probability of the occurrence of some unfortunate event or the chance of incurring a loss of some value. Risk indicates that the decision-maker knows of possible outcomes of a given decision and their relative likelihoods on making it. This uncertainty can be expressed in a mathematical form so that the mean estimate for all uncertainty values would end up contained in one numerical value. Risk is in a class by itself. Although it is born of uncertainty, it is that very uncertainty that gives it some magnitude, if cash flows to be received from that investment fall within a range. Risk, then, is measured in terms of standard deviation. In project analysis, project risk indicates the chances of returns being below or less than expected value. As the chances of such losses or less returns become greater, project risk becomes higher (Pradhan, 2003).

Risk is defined in Webster's dictionary as a "hazard: a peril: exposure to loss or journey"; thus, for most, risk refers to the chance that an unfavorable event could take place. If you invest in speculative stock (or, really, any stock), you are taking a risk, hoping for a decent return (Weston &Brigham, 1992).

2.2.6 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).

Portfolio theory deals with selection of optimal portfolios, that is, 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). Portfolio management involves having an

art of such managing of a pool of funds that the management not only preserves its original worth but also, over time, appreciates in value and yields an adequate return consistent with the level of risk assumed. A logical set of steps are involved in the process of portfolio management which are most often applied to any decision planning, implementation, and monitoring. The issue of deciding on setting an investment goal followed by the decisions on how best to achieve the goal using the available securities is the central concern in the management of portfolios.

2.2.7 Investment Portfolio

Every possible criterion for automobile performance, including acceleration, braking, handling, and safety, should be included when drawing a balancing portfolio. Portfolio theory is about the selection of optimum portfolio- portfolio providing the highest possible return for any specified degree of risk, or lowest possible risk for any specified rate of return. Hence portfolio theory has been developed for the financial assets. Thus, investment portfolio thus formed from the selected optimum portfolio i.e. portfolio which gives highest rate of return with least possible amount of risk is the real portfolio. As per Weston & Brigham (1992:235), "A portfolio simply represents the common practice among investors for keeping their funds into more than one asset." Whereas a portfolio is denoted as the collection of investment assets- has one definite right to insist on proper performance of a seasoned investor, along with opportunities to ensure alterations may be made in the manager's constrain, manager's investment objective, and the money allotted to the 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.

2.2.8 Risk

Risk, as defined by Cheney and Moses (1992), encompasses the uncertainty surrounding the negative returns, specifically referring to the doubt regarding the return of money lent by investors, often denoted as bankruptcy risk. Not limited to bankruptcy risk, stockholders are advised to consider the possibility of the firm's returns falling below a predetermined target rate. Various parameters like range, variance, standard deviation, coefficient of variance (CV), and beta are utilized for assessing risk. Fisher (1906) suggested variance as an indicator of economic

risk, while Cheney and Moses identified beta as a gauge of systematic risk, which denotes non-diversifiable risk beyond an organization's control. Conversely, unsystematic risk, described as diversifiable risk, can be mitigated through portfolio diversification. Beta values typically range between +0.5 and 2.0, with most assets falling between +0.4 and 1.9 according to Fisher and Jordan (200). A beta of one signifies that the security's returns vary in tandem with the market's overall returns. Systematic risk, comprising both diversifiable and non-diversifiable components, can be minimized through portfolio diversification. The systematic risk ratio is determined by the covariance (j, m) divided by the market's standard deviation. On the other hand, unsystematic risk is portrayed as the product of asset standard deviation and (1-Pjm). Weston and Copland (1992) have characterized systematic risk as the result of b and Var (Rm), while unsystematic risk is indicated by Var. Fisher and Jordan (2000) delineate systematic risk as a component of the total return variability influenced by economic, political, and social shifts. Weston and Copland elaborate that if the non-diversifiable or systematic risk in an investment's return surpasses that of the market portfolio, the beta of the individual investment exceeds one, along with a higher risk adjustment factor compared to the market as a whole. The beta of an individual security is reflective of industry attributes and management strategies that influence return fluctuations concerning overall market variations. In a stable economic setting, with unchanged industry characteristics and consistent management policies, the beta measure tends to be relatively stable across different time frames. However, in the absence of this stability, beta values will fluctuate. Sharpe et al. (2003) characterize risk as the deviation between actual and expected returns, highlighting standard deviation as a metric for such disparity. Clark (n,d) states that standard deviation and variance are equally valid and conceptually equivalent quantitative gauges of an asset's overall risk.

Weston and Copland (1992) discuss three possible attitudes towards risk: a desire for risk, aversion to risk, and indifference to risk. They also elaborate on utility theory, explaining the concept of diminishing marginal utility for wealth. According to this theory, individuals experience more distress from losing a dollar than joy from gaining one when their marginal utility for wealth decreases. This phenomenon influences investors' risk attitudes, as most investors exhibit diminishing marginal utility for wealth. The authors also explore the concept of indifference curves, illustrating how each point on the curve represents a specific combination of

mean and standard deviation of returns that provides an equally desirable outcome for a risk-averse investor.

2.2.9 Risk Diversification through Portfolio Construction

Elton and Gruber (2001) discussed the impact of diversification. They explained that a portfolio consisting of varying numbers of assets, from 1 to infinity, exhibits a decreasing trend in the expected portfolio variance. This concept was illustrated through an artificial example where the addition of more securities led to a decrease in the average variance of the portfolio until it approached the average covariance. The authors also highlighted that the effectiveness of diversification in risk reduction varies across different countries. The relationship between average covariance and variance differs from country to country. For instance, Switzerland and Italy exhibit relatively high covariance among securities, suggesting that stocks tend to move in similar directions. Conversely, the security markets in Belgium and the Netherlands show stocks with lower covariance, indicating that more of the individual securities' risk can be diversified. Diversification proves to be particularly advantageous in mitigating portfolio risk in these markets.

2.3. Empirical Review

Venugopal (2024) examined the influence of institutional factors on bank efficiency by analyzing how various loan portfolios affect efficiency across different categories of banks. The methodology includes performing a Data Envelopment Analysis (DEA) to derive efficiency scores, followed by regression analysis to evaluate the connection between lending policies and efficiency. The results indicate that effective resource management can greatly improve bank efficiency. The study emphasized the critical role of loan portfolio management in shaping bank efficiency, with new private banks showing superior efficiency in handling diverse loan types compared to public and older private banks.

Zewdie and Bakalo, (2024) examined A systematic review of 49 studies from 2010 to 2023 examined the impact of Product Portfolio Management (PPM) on firm performance. Sourced from academic platforms such as Emerald, Google Scholar, and ResearchGate, the studies were selected using rigorous inclusion/exclusion criteria to ensure relevance and quality. The findings revealed that effective PPM enhances profitability through optimized resource allocation, provides a competitive advantage by strengthening market positioning, and is particularly critical

for risk management and performance optimization in sectors like banking and insurance. Strategic tools such as portfolio mapping further improve portfolio outcomes. The review recommends that organizations prioritize PPM practices to maximize profitability, align product decisions with business strategies, and balance short-term and long-term objectives, emphasizing its importance for achieving strategic goals and maintaining competitiveness.

Margaret (2023) aimed to investigate the relationship between credit management policies and the performance of loan portfolios at Equity Bank's Kampala branch. Data analysis incorporated both quantitative and qualitative methods, employing statistical software (SPSS) to organize, code, and analyze the gathered information. The findings indicated that a significant majority of respondents acknowledged the influence of credit terms on loan portfolio performance, highlighting a strong link between effective credit management policies and enhanced financial results for the bank.

Aris and Rahimi (2023) aimed to analyze the impact of loan portfolio diversification on credit risk taken by commercial banks in Afghanistan during the period 2007 to 2019, using annualized data and regression model based on the least squares method. The results showed that diversification decreases credit risk significantly, the capital adequacy ratio was also investigated in this study. The finding indicated that a higher level of shareholders capital in the bank’s total capital is positively related to a decrease in non-performing loans.

Lekwauwa and Bans-Akutey (2022) evaluated the relationship between the profitability of commercial banks in Ghana and their portfolio management, focusing on how asset investments and loan portfolios affect financial performance. A descriptive research design was used, analyzing a sample of all nine banks listed on the Ghana Stock Exchange (GSE) over a five-year period from 2016 to 2021. Data was gathered from financial statements and bank reports, employing both descriptive and inferential statistics, including multiple regression analysis and correlation coefficients, to interpret the findings. The findings highlight the necessity of strong portfolio management policies, recommending that management and stakeholder focus on best practices in portfolio management to meet strategic objectives and enhance profitability.

Muratenyi (2022) conducted to investigate the effect of loan portfolio quality on the financial performance of commercial banks in Kenya. The specific objectives to determine the importance of loan loss provisions, the impact of loan loss allowances, and to measure the effect of gross

impaired loans on returns on assets (ROA) and equity (ROE) were to guide the research project. The research used descriptive research design, which includes percentages, means, standard deviations, correlations, and a panel data regression model. The population comprised 38 fully operating Kenyan commercial banks as of 2020, with the data collected from audited financial reports and then analyzed using SPSS and Microsoft Excel. The results showed a strong and statistically significant relationship between loan portfolio quality and financial performance metrics; however, the link of loan loss allowances and gross impaired loans with ROE was not significant. Loan portfolio quality was the most important factor that significantly influences financial performance, so the study recommended a robust loan management program that will ensure sustainable returns.

Fabian (2021) explored how portfolio management impacts the performance of listed deposit money banks in Nigeria, with a particular emphasis on credit risk management and liquidity risk management. Using an ex post facto approach, data was gathered from the banks' annual reports spanning 2016 to 2020 and analyzed through linear regression. The results indicate a significant positive correlation between both credit risk management and liquidity risk management and the banks' performance, as indicated by net assets per share (NAPS). The study concludes that effective portfolio management is crucial for improving the financial performance of deposit money banks in Nigeria, recommending enhanced monitoring of liquidity and optimization of loan-deposit ratios to reduce non-performing loans. Additionally, it points out the scarcity of literature on market value-based measures of bank performance in Nigeria, suggesting that a deeper understanding of this area could greatly enhance banking practices.

Mishra et al, (2021) researched on Profitability in Commercial Bank - A Case from Nepal and the banking in Nepal is under the process of being systematized. It is believed that foreign aid is a key component for development in Nepal. The current study focuses on evaluating the impact, contribution, and relationship between size, loans and deposits, inflation, and capital with the profitability of the banks. A total of 2013-2019 secondary data of seven commercial banks was collected along with a survey as primary data. The correlation and regression along with ratio analysis have been used to assure a contributory association among return on assets (ROA), return on equity (ROE) and net interest margin (NIM). The size of banks is in an increasing trend. The decreasing trend of standard deviation showed that the size of Nepalese commercial banks has lower variation in the use of total assets as the year increases. There is a negative

relation between ROA and ROE with loan ratio, deposit ratio, and capital ratio, while there is positive relation with bank size and inflation.

Adaramola (2020) explored the relationship between portfolio management and the performance of banks in Nigeria, emphasizing how loan risk analysis, diversification, and monitoring affect bank performance, particularly as measured by Return on Assets (ROA). The research employs both primary and secondary data, with primary data gathered through a portfolio management scale and secondary data obtained from the annual financial statements of selected banks. Statistical methods, including multiple and logit regression, indicate that effective management of loan portfolios significantly boosts the performance of deposit money banks in Nigeria by establishing a positive relationship among the evaluated factors. Key findings reveal that each aspect of loan risk management—analysis, diversification, and monitoring have a beneficial impact on overall bank performance.

Bhatt and Jain (2020) conducted a study on Capital Structure and Profitability of Commercial Banks in Nepal. This study seemed to examine the relationship between the capital structure and the profitability of commercial Banks in Nepal. In this connection, 18 Nepalese commercial banks were selected as study samples and their financial data were gathered from NRB BI Statistics and Bank Supervision Report for the period of 2010-2019. Return on Equity was used as an indicator of profitability while short term debt, long term debt, deposits and total debt to assets ratio were used as a proxy of capital structure along with the control variables of bank size and assets growth. Results showed that more than 40 present bank profitability measured by return on equity is predicted by the explanatory –capital structure variables. It is also unveiled that return on equity is insignificantly positively related with long term debt and deposits whereas it is insignificant negative with short term debt and total debt. In all regression models, profitability is significantly positively related with banks size indicating that larger the size of the bank, higher is the return for shareholders.

Igbinedion (2019) explored the relationship between risk management practices and investment performance of Nigerian banks. The purpose of this study is to verify that there is a significant relationship between risk management and investment performance of bank investment portfolios, specifically as measured by return on assets (ROA). To achieve this, the researchers employed a quantitative approach over a five-year period, using secondary data from the annual

reports and financial statements of 10 deposit money banks (DMBs). This analysis uses the generalized method of moments (GMM) to evaluate the data. The results reveal a significant negative relationship between bank risk management and portfolio investment performance, thereby rejecting the null hypothesis.

Gauchan & Upadhya, (2019) conducted a study on the evidence of credit portfolio management and its relationship with banks' financial performance. The monthly financial reporting of 7 joint-venture commercial banks was utilized to analyze by comparing sector-wise portfolio management of bank's loan and its relationship with return on assets. Descriptive and fixed effect regression had been used to analyze panel data. It reveals that all the sectors have an impact on banks' financial performance except for consumption & others. From this it may be concluded that JVBs of Nepal are managing their portfolio as per standard parameter allocated by the directives provided through NRB. The service sectors invest highest portion of loan and in contrary to this agriculture & mining is the lowest. Similarly, the profitability of the bank has a positive relation with all sectors except for consumption and other sectors. Defining sector-wise portfolio management provides a good framework for maintaining the sustainability of the bank.

Mpumwire and Mulyungi (2018) examined portfolio management and financial performance nexus in banking sector of Rwanda focusing on Rwanda Development Bank (RDB). The correlational study design aimed to measure relationship between variables like asset allocation, risk diversification and asset rebalancing and their effect on financial performance. The research methodology of primary data collection through questionnaires and interviews from the employees of Rwanda Development Bank was employed with sample size of the selected respondents following simple random sampling. Descriptive and correlational statistics (e.g., simple and multiple regression, Pearson's correlation coefficient) were employed to determine the strength of linear relationships between pairs of data. The results showed that there is a positive association between financial performance and asset allocation, risk diversification, asset rebalancing, i.e., all these variables that hold significant relevance in the financial well-being and health of bank.

Kandel (2018) conducted on common stock of two commercial banks listed in Nepal stock exchange Limited. In order to compare the sector-wise portfolio management of banks' loans with return on assets, data of monthly financial reporting were drawn for 7 joint-venture

commercial banks. The panel data are analyzed using descriptive and fixed-effect regression. The result reflects all the sectors except for 'consumption & others have influence on the financial performance of the banks. From this, it may be concluded that JVBs of Nepal are managing their portfolio as per standard parameter allocated by the directives provided through NRB. The service sectors invest the highest portion of the loan and in contrary to this agriculture & mining is the lowest. Similarly, the profitability of the bank has a positive relation with all sectors except for consumption and other sectors. Portfolio management sector-wise thereby helps provide a good framework for maintaining sustainability at the bank.

Malla (2017) studied on Credit Portfolio Management in Nepalese Commercial Banks aims to evaluate the current practices of credit portfolio management in Nepalese banks and assess the effects of these practices on the performance of commercial banks, juxtaposing the governmental and institutional dimensions of banking performance. The study had adopted a mixed-methods research design, comprising both primary data gathered via interviews, questionnaires, and focus group discussions, along with the secondary data from banks and regulatory bodies. Six commercial banks were finally selected for the analysis, and different loan portfolio management parameters in line with Nepal Rastra Bank directives were employed. The findings substantiate that the banks, very well, have managed the loan portfolios within the bounds proscribed by the regulatory authorities with respect to maximum limits regarding real estate loans, deprived sector loans, and nonperforming loans. The study mentions that a good number of loans are secured by collateral in a very cautious lending manner. It is not all good news, as the credit risk management practices still require some improvements.

Wamalwa and Jagongo (2017) investigated the correlation between the management of loan portfolios and performance in microfinance institutions (MFIs) in Kenya. It notes the challenges of loan defaults and suggests strategies for improving financial inclusion and poverty alleviation. Employing quantitative and qualitative review of secondary literature of both theoretical and empirical studies, it sets Kenya in comparison with Uganda and advocates for incorporating both financial and non-financial indicators into performance measurement. The findings conclude with these best practices often taking the backseat for excessive emphasis on financial measures like credit risk management and customer screening.

Ugoani (2016) examined the impact of non-performing loans (NPL) on the profitability of banks in Nigeria. The study adopted an exploratory research design that focused on a sample of 3 out of 20 depository money banks (DMBs) in Nigeria. Data were collected from annual reports and financial statements and analyzed using descriptive and regression analyses. The study reveals a significant negative effect of NPL on bank profitability as shown in the regression equation Y = 78.353 - 4.04x. The study highlights that high levels of nonperforming loans adversely affect the loan growth rate, which in turn negatively impacts banks' profitability by reducing both the amount of loans and the interest income generated from them.

Senthilnathan (2016) evaluated portfolio management in order to find out that 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.

Todoni (2015) compared the alternative method with the conventional sortino ratio method and to determine which method produces more refined and accurate results. The process is to use both methods to compute risk-adjusted returns and rank countries accordingly. These results imply that trade and welfare rankings are rather similar: Hungary and Romania are winners while poor performers are Bulgaria and Poland. It should be noted that both methods yield similar rankings, which find Hungary and Romania are high scorers, whereas Bulgaria and Poland are poor scorers.” But the other approach is more flexible, more tuned to how an investor actually goes about investing and is a better measure of risk. The target return, as well as the size of the window used, affects the risk adjusted return and increasing either can produce worse Sortino ratio results.

Adhikari (2015) analyzed the factors which are related with investment portfolio analysis on secondary data published by and collection from selected banks and form the journals and unpublished articles and thesis only three commercial Banks are taken under study. The study covers a timeframe of five fiscal years, during which data was tabulated and processed to draw conclusions. The main focus of the study is to assess the current state of portfolio management in

commercial banks in Nepal. Additionally, it aims to examine the investment portfolios of banks, particularly in terms of liquidity asset management and profitability ratios. The analysis also evaluates the relationship between deposits, government securities, risk, and return in commercial banks. The Key findings from the study include: EBL exhibiting the highest diversifiable risk, which can be mitigated through portfolio methods; Nabil Bank facing the highest non-diversifiable risk, reducible to certain levels but not eliminable entirely; a positive covariance between banks' investment returns in securities, loans, and advances, indicating effective deposit utilization. The return on equity for NABIL, EBL, and NIBL banks has been fluctuating, with NABIL maintaining a higher average ratio compared to other banks, reflecting efficient equity utilization and increased returns for NABIL shareholders. Moreover, the lower coefficient of variation of NABIL suggests greater consistency in ratios compared to other banks.

Table 1

Meta table of the Articles

Date of Publication	Article	Authors	Objectives	Methodology	Findings
2024	Loan Portfolio Management and Bank Efficiency: A Comparative Analysis of Public, Old Private, and New Private Sector Banks in India	Venugopal	To investigate how diverse loan portfolios impact bank efficiency across different bank	Data Envelopment Analysis (DEA) is used in the study to determine the efficiency score. Regression analysis was also employed in the study to assess the relationship between lending policies and efficiency.	The study finds that loan portfolio management influence bank efficiency, demonstrating that new private bank are expert at managing loan than both public and established private banks.
2024	Product portfolio management and firm performance: a systematic riview	Zewdie, Bakalo	To evaluate the impact of PPM on firm performance. To analyze the role of PPM on resources allocation, risk management and strategic decision	The data was collected using a systematic strategy and analyzed using content analysis from various sources such as	The study found that product portfolio management significantly enhances firm performance by improving

			making.	Emerald, Google Scholar, Research Gate, Wiley online library, Tyler, and Francis.	profitability, optimizing resource allocation, and supporting strategic decision-making.
2023	Credit Management Policies and Loan Portfolio Performance of Equity Bank: Kampala District	Margaret	To analyze the relationship between credit management policies and the performance of loan portfolio at Equity banks.	The study used quantitative and qualitative method for data analysis and also used SPSS software.	The study finds out that there is a strong and positive relationship between effective credit management policies and financial results for the banks.
2023	The impact of loan portfolio management on credit risk evidence from banking sector of Afghanistan	Rahimi	To examine the impact of loan portfolio diversification on credit risk in commercial banks in Afghanistan. To analyze the relationship between the capital adequacy ratio and the level of non-performing loans in banks.	The study used annualized data and regression model based on the least square method.	The study found that Loan portfolio diversification significantly reduces credit risk, supporting the traditional portfolio management theory.

2022	Commercial Banks Profitability and Portfolio Management in Ghana	Lekwauwa & Bans-Akutey	To investigate the effects of portfolio management, with a focus on credit risk management and liquidity risk management, on the performance of Nigerian listed deposit money banks.	In order to analyze a sample of all nine banks listed on the Ghana Stock Exchange (GSE) over a five-year period from 2016 to 2021, the study employed a descriptive research design.	The study finds out that asset investment significantly improved Ghanaian commercial banks' financial performance and also discovered that profit margins are positively impacted by well-managed loan portfolios.
2022	Assessment of Loan Portfolio Quality on Financial Performance of Commercial Banks in Kenya	Muratenyi	To assess the impact of loan portfolio quality on the financial performance of commercial banks. To determine the significance of loan loss provisions, evaluate the impact of loan loss allowances, and gauge the effect of gross impaired loans on returns on assets (ROA) and equity (ROE).	A descriptive research design was employed, utilizing percentages, means, standard deviations, correlations, and a panel data regression model.	The findings revealed a largely positive and significant correlation between loan portfolio quality indicators and financial performance metrics, although the association of loan loss allowances and gross impaired loans with ROE was insignificant.
2021	Portfolio of Commercial Bank – A Case Stuy of Nepal, International Journal of Case Studies in Business, IT, and Education	Mishra, Kandel	Banking in Nepal is under the process of being systematized. Foreign aid is believed as key component for development in Nepal. This study aims to assess the impact, contribution and relationship of size, loans and deposit, inflation and capital on the	Secondary data from 2013 to 2019 from seven commercial banks along with the survey as primary data were collected. The correlation and regression along with ratio analysis have been used to assure a	The study finds oust that there is a negative relation between ROA and ROE with loan ratio, deposit ratio and capital ratio, while there is positive relation with bank size and inflation. .

			profitability of the banks.	contributory association among return on assets (ROA), return on equity (ROE) and net interest margin (NIM).	
2021	Effect of Portfolio Management on Performance of Listed Deposit Money Banks in Nigeria	Fabian	To investigate the effects of portfolio management, with a focus on credit risk management and liquidity risk management, on the performance of Nigerian listed deposit money banks.	The study used a ex post facto approach, data was gathered from the bank annual reports spanning 2016 to 2020.	The study finds out that effective portfolio management is crucial for improving the financial performance of deposit money banks in Nigeria, recommending enhanced monitoring of liquidity and optimization of loan -deposit ratio to reduce non-performing loans.
2020	Portfolio Management and Bank Performance in Nigeria	Adarmola	To examined the relationship between portfolio management and bank performance in Nigeria.	The study used primary and secondary data where primary data gathered through a portfolio management scale and secondary data obtained from the annual financial statement of selected banks. The study also used statistical method including multiple and logit regression.	The study finds that each aspect of loan risk management analysis, diversification and monitoring has a beneficial impact on overall bank performance.

2020	Capital Structure and Profitability of Commercial Banks in Nepal. Account and Financial Management	Bhatt, Jain	This study seeks to examine the relationship between the capital structure and the profitability of commercial Banks in Nepal.	In this connection, 18 Nepalese commercial banks were selected as study samples and their financial data were gathered from NRB BI Statistics and Bank Supervision Report for the period of 2010-2019.	Results showed that more than 40 percent bank profitability measured by return on equity is predicted by the explanatory – capital structure variables. It is also revealed that return on equity is insignificantly positively related with long term debt and deposits whereas it is insignificant negative with short term debt and total debt.
2019	Risk Management Approach and Banks' Portfolio Investment Performance in Nigeria	Igbineedio n	To examined the relation between risk management practices and investment performance of Nigerian Banks.	The study used generalized method of moments (GMM) to analyzed the data.	The study finds out that there is negative relationship between the bank risk management and portfolio investment performance.
2019	Credit Portfolio management and profitability of join venture banks of Nepal. International Journal of Economics and Management Studies (SSRG-IJEMS) – Volume nt	Upadhya	The study aims to show the evidence of credit portfolio management and its relationship with banks' financial performance. It also aims to analyze by comparing sector-wise portfolio management of bank's loan and its relationship with return on assets.	Descriptive and fixed effect regression was used to analyze the panel data. It reveals that all the sectors have an impact on banks' financial performance except consumption & others.	The study concludes that the JVBs of Nepal have managed their portfolio as per the standard parameter allocated by Nepal Rastra Bank (NRB) directives. The highest portion of loan in JVBs is invested in service sector and lowest in agriculture & mining sector of

	Bank				bank.
2018	Effect of Portfolio Management on the Financial Performance of the Banking Industry in Rwandacase Study: Rwanda Development	Mpunwire & Mulyungi	To examine portfolio management and financial performance nexus in banking sector of Rwanda focusing Rwanda Development Bank. To measure the relationship between variables like asset allocation, risk diversification, asset balancing and their effect on financial performance.	The study used Descriptive and correlation statistics (Simple and multiple regression, Pearsons' Correlation coefficient) to determine the strength of linear relationship between pairs of data.	The study finds out that there is positive association between financial performance and asset allocation, risk diversification and asset balancing.
2018	Risk and return on common stock investment of Nepalese stock market.	Kandel	Analyze the risk and return on common stock investment of Nepalese stock market.	Both quantitative and qualitative analysis has been analyzed by using scientific methods. After the analysis of risk and return of sample bank and based on the past data of their last five fiscal years.	It is concluded that all the commercial banks are very much risky with fluctuated rate of return. From the findings of beta coefficient of each sample bank, the C.S. of NABIL is seeming very much volatile than NIBL stock.

2017	Loan Portfolio Management and Firm Performance: Theoretical Paper Review	Wamalwa & Jagongo	To explain the relationship loan portfolio management and the performance of microfinance institutions in Kenya. To identify the challenges faced by MFIs in managing their loan portfolios and to provide insights for improving their performance.	The study used literature review, examining both theoretical and empirical studies related to loan portfolio management and performance.	The study found that effective loan portfolio management including customers screening and credit risk control, significantly impacts the performance of MFIs.
2017	Credit Portfolio Management of Nepalese Commercial Banks	Buddhi Kumar Malla	To examine the effect of loan portfolio management on the performance of banks. To identify the factors influencing loan portfolio management in Nepalese commercial banks.	The study used both primary and secondary data, random sampling method, quantitative and qualitative research method.	The study found the selected bank effectively managed their portfolio in line with the NRB directives, maintaining real stated loan below 25%, deprived sector loans at a minimum of 4.5%, and non-performing loans at or below 5% of the total portfolio.
2016	Non Performing Loans Portfolio and its Effect on Bank Profitability in Nigeria	Ugaoni	To find out the impact of non-performing loan on the profitability of Nigerian Banks.	Explanatory research design with a sample of 3 out of 20 depository money bank is used as methodology. Data is collected from annual reports and financial statements of banks.	The study find out that regression analysis indicates a significant negative relationship between nonperforming loans and bank profitability.

2015	A Post-Modern Portfolio Management Approach on CEE Markets	Tadoni	To analyzed the alternative method with the conventional sortino ratio method.	The study used the alternative method and conventional method to compute risk adjusted return and ranks.	The study finds out that alternative method is found to be more flexible and adapted to the investment process reality, and provides a better measure of risk
2015	A study on portfolio management of commercial Banks in Nepal with references to Nabil Bank, Everest Bank ltd and Nepal Investment Bank Ltd.	Adhikari	To study the investment portfolio of bank in aspect of liquidity assets management and profitability ratio., To examine deposit and government securities in term of risk and return.,To analyze the risk and return ratio of commercial banks	The study is based only on those factors, while are related with investment portfolio analysis on secondary data published by and collection from selected banks and form the journals and unpublished articles and thesis only three commercial Banks are taken under study	The return on equity of NABIL, EBL and NIBL banks has been fluctuating. The average ratio of NABIL bank is higher than other banks which indicate that NABIL has utilized its equity to make income. It signifies that shareholder of NABIL bank are getting higher return.

2.4 Research Gap

In the case of Nepal's development banks, portfolio management and profitability has remained an area that has not been given much attention, more so when it regards the mix of profitability, risk diversification and staying within limits of the regulations in place. Most of the studies deal with commercial banks but development banks also, though to some extent resources constrained, face specific problems such as concentration on a smaller client base, concentration based on sectors, etc which affect their portfolio strategies. Some scholars paid inadequate attention to how development banks implement strategies seeking to maximize returns on investment portfolios while minimizing risks with regards to fluctuations caused by political factors, interest rates changes and market overall liquidity and conditions. Furthermore, there is little study on how the development banks' portfolio management and profitability is targeted

towards above the national goal objectives such as infrastructure development and SMEs loan financing. published works regarding the application of modern portfolio theory, the modern organizational structure of the development banking sector of Nepal, the impact of concentration on strategic direction, and the use of risk assessment in Nepal's development banking sector are few and therefore further and wider perspectives in this regard are necessary.

The research centers on the portfolio management strategies of development banks in Nepal. Previous studies have largely failed to connect portfolio management practices with the performance outcomes of these institutions, and how such practices could be optimized for better financial results. This research gap has driven the focus towards a detailed examination of portfolio management and profitability in several Nepalese development banks, specifically Excel Development Bank, Kamana Sewa Bikas Bank, Jyoti Bikas Bank, Garima Bikas Bank and Muktinath Bikas Bank. The study provides the information about the latest statistical tool used by the development banks in present scenario. This study covers the latest and annual reports of five development banks as of July 2023. The goal of this study is to provide valuable insights for a diverse audience including academics, policymakers, scholars, students, stakeholders, entrepreneurs, and government officials enhancing both scholarly debate and practical policy-making.

CHAPTER – III

RESEARCH METHODOLOGY

3.1 Research Design

This study seeks to critically examine and evaluate the portfolio management and profitability practices of development banks, with the goal of providing targeted recommendations for improvement. The study adopted a descriptive and casual research design. Descriptive research design focuses on an in-depth analysis and interpretation of the gathered data where Casual research design focuses on measuring the cause-and-effect relationship between the different variables.

The research relied on secondary sources, such as official bank websites and annual reports, to collect relevant information. The methodology included aggregating data from multiple sources and employing various financial and statistical techniques to analyze it. The final output of the study includes a detailed summary of findings, insights drawn from the analysis, and practical recommendations designed to enhance the effectiveness of portfolio management strategies in development banks.

3.2 Population, Sample and Sampling Design

As of mid-January 2024, Nepal Rastra Bank noted the presence of 17 development banks across Nepal. Of these, only 5 were designated as national-level development banks, which were the target of this research. The study specifically focused on five of these institutions: Excel development bank, Kamana sewa Bikash Bank, Jyoti Bikash Bank, Garima Bikash Bank, and Muktinath Bikas Bank, selected through a convenience sampling approach.

3.3 Nature and Sources of Data, and the Instrument of Data Collection

The research draws on secondary data, leveraging existing information that has been previously published and utilized by other researchers. This includes financial documents like Balance Sheets and Profit & Loss statements from pertinent banks, along with literature produced by these institutions. The study also heavily relied on data from the NEPSE report. Additional information was sourced from esteemed organizations such as Nepal Rastra Bank, the Library of Tribhuvan University, Nepal Stock Exchange Limited, the Securities Exchange Board, the

Economic Survey, the National Planning Commission, and a range of journals, magazines, and both published and unpublished reports from relevant authorities.

The research mainly draws on secondary data obtained from the annual reports issued by the banks involved. Since all the banks under examination are listed on NEPSE, this guarantees the accuracy and appropriateness of the data used.

The research relies on secondary data, which requires a unique method of data collection due to its inherent characteristics. This data is sourced from a variety of published materials, including books from different authors, unpublished thesis reports, academic journals, websites, online libraries, and annual reports from companies listed on the Nepal Stock Exchange and overseen by the Securities Board of Nepal. To gather this information, researchers utilized the resources available at the RRM Library on campus.

The value of collected data hinges on how it is organized and presented. To enable insightful analysis, it's essential to validate and simplify the data. The process involves careful examination, editing, and tabulation of the data to support accurate computation and interpretation.

Relevant information has been carefully arranged into informative tables, enhancing both clarity and relevance for the research. Extraneous details have been excluded to improve comprehension. By employing a range of financial and statistical tools, we strive to draw meaningful conclusions from the data at hand.

The statistical software SPSS has been employed to streamline the calculation of statistical information, enhancing efficiency in analysis.

3.4 Methods of Analysis

Data analysis and presentation form the cornerstone of every research endeavor. This study necessitates the application of both financial and statistical methodologies to achieve its objectives effectively. These tools are considered highly dependable. The research employs a variety of financial, statistical, and accounting techniques, enhancing the analysis's effectiveness, convenience, reliability, and authenticity. The results derived from these tools are systematically organized into different categories and compared to facilitate interpretation. The study utilizes two primary categories of tools:

- Financial Tools
- Statistical Tools

3.4.1 Financial Tools

This research delves into investment portfolio analysis, focusing on the practical application of financial tools. These tools serve to analyze and interpret financial data effectively, providing detailed insights into business operations. By scrutinizing investment policies and strategies, they uncover both strengths and weaknesses. The study employs a variety of financial tools to achieve its analytical goals.

1. **Return on Total Assets**

Return on total assets, also known as return on investment, signifies how effectively a bank generates profits from its various asset allocations. It is crucial for the bank to strike an optimal balance in utilizing its total assets (working funds) to achieve maximum profitability while ensuring liquidity remains intact. A higher ratio indicates superior asset utilization in profit generation terms.

$$Return\ on\ Total\ Assets = \frac{Net\ Profit}{Total\ Assets}$$

3.4.2 Statistical Tools

Statistical tools play a crucial role in achieving the study's goals, facilitating the analysis of relationships between multiple variables. This research employs the following statistical methodologies for data analysis:

1. **Mean**

Mean is the simple mathematical average of a set of two or more numbers. It can be computed using the arithmetic mean method, which uses the sum of the numbers in the series.

$$\bar{x} = \frac{\Sigma X}{n}$$

Where,

x□ = Mean of the values

ΣX = Sum of the values

n = Number of Pairs of Observations

2. Standard Deviation

The standard deviation quantifies how spreads out the values are. Dispersion refers to how much the data points deviate from the average value in a series. A higher dispersion corresponds to a larger standard deviation. A smaller standard deviation indicates that the observations are closely clustered around the mean, implying uniformity and consistency within the series. Conversely, a larger standard deviation suggests less uniformity among the observations. Mathematically, standard deviation is computed as follows:

$$\sigma = \sqrt{\Sigma(X - \bar{x})/n}$$

Where,

σ = Standard Deviation

Σ = Sum of the observations

X = Observation Set

x□ = Mean of the values

n = Number of Observation

3. Karl Pearson's Correlation Coefficient Analysis

The correlation coefficient evaluates the connection between two or more variables, indicating how changes in one variable relate to changes in another. It reflects the direction of the relationship between variables. One approach to measuring correlation is through Pearson's coefficient, symbolized by 'r'. This coefficient can be computed using the following formula:

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

Where,

N = Number of Observations

When,

$r = 0$, there is no relationship between the variables.

$r = 1$, the variables have perfectly positive correlated.

$r = -1$, the variables have perfectly negative correlated

4. Regression Analysis

Regression serves as a statistical technique employed to explore connections between variables through the formulation of an approximate functional relationship. It proves invaluable in assessing the degree of association between two (Simple Regression) or more (Multiple Regression) variables. This method facilitates the prediction or estimation of one variable's value when the values of others are known. The regression line depicting the dependent variable in relation to the independent variable is expressed as follows:

$$\text{Profit}_t = \beta_{0+}\beta_1 \log(\text{gov sec}_t) + \beta_2 \log(\text{loan adv}_t) + \beta_3 \log(\text{duefin}_t) + \beta_4 \log(\text{NPL}_t) + \beta_5 \log(\text{sharedeb}_t) + \varepsilon_t$$

Where,

Profit_t = Profitability that is measured as the ratio of net income to total asset,

gov sec_t = Government securities held by bank,

loan adv_t = Loan and Advance invest by bank,

duefin_t = Total value of holding due from other financial institutions,

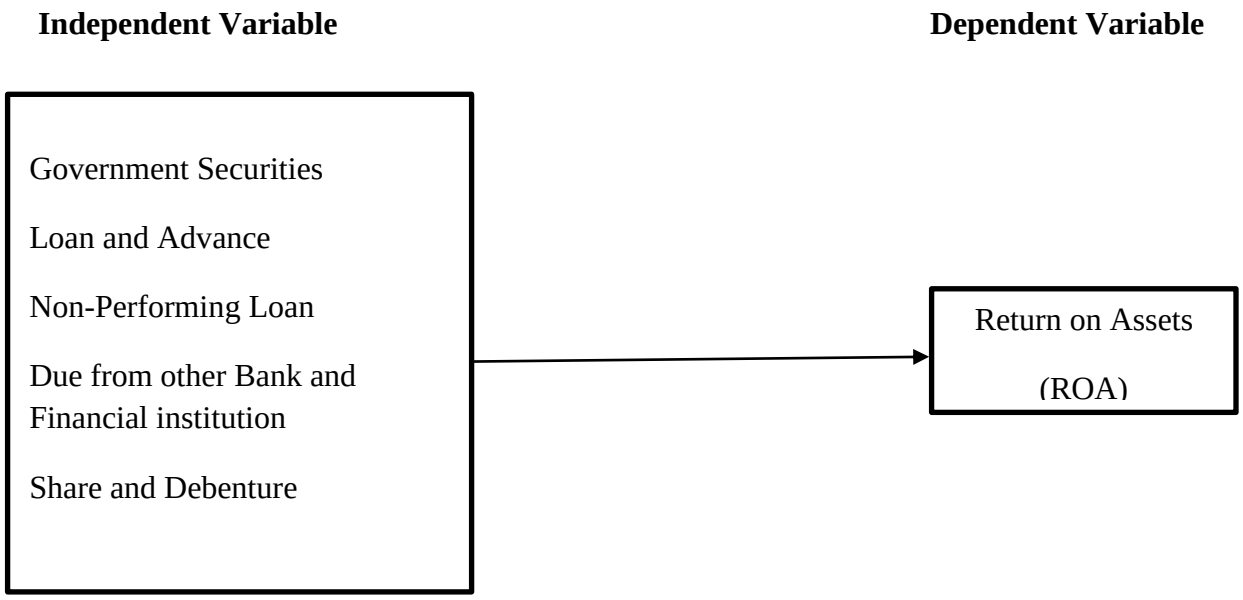
NPL_t = non-performing loan of banks

$sharedeb_t$ = Total investment on share and debenture

ε_t = Error term at time

3.5 Research Framework and Definition of Variables

Here are the identified independent and dependent variables incorporated within the research topic of portfolio management in development banks in Nepal. The theoretical framework illustrates the interconnectedness of these variables, as shown in the accompanying diagram:



(Source: Andrews, 2020)

Figure 1: Research Framework

Definition of Independent Variables

Government Securities

Government securities are debt instruments issued by the government for raising funds from the public. Such securities represent a loan from the investor to the government and are generally fixed-income products such as treasury bills, bonds, and savings certificates. Such instruments are called low-risk since they are backed by the credit of the issuing government and provide periodic interest payments or capital appreciation on maturity. Government securities are used to

cover budget deficits, fund infrastructure projects, and meet other public expenditure with a guarantee of regular and stable returns for investors (Investopedia, 2024).

Loan and Advance

Loans and advances refer to financial assistance from banks and other financial institutions to individuals, businesses, or organizations for any desired purpose. A loan is a facility extended, usually in a lump sum amount, for a fixed period on a decided repayment schedule, generally carrying a fixed or variable rate of interest. Usually, loans are long-term loans secured by collateral, while advances represent support for shorter-term financing based on the immediate working capital/operating needs. They may or may not be secured by collateral and are usually available in the form of revolvers. Loans and advances are conducive to economic growth, given their role in providing financial assistance to an individual and businesses (Kumar, V., & Mittal, R., 2021)

Due from other Bank and financial institutions

Due from other BFIs (Banks and Financial Institutions) refers to that portion of funds in the custody of, or expected to receive from, other BFIs. They usually include balances in interbank accounts, deposits placed with other bank and financial institutions, or funds resulting from financial transactions such as clearing settlements, loans, or investments. These could be assets in the books of accounts and signify a claim of the institution over funds with other BFIs. This account thus regulates liquidity, interbank operations, and optimizes the use of resources in the banking system (Mishkin, 2019).

Non-Performing Loans

Non-Performing Loan (NPL): A loan whose borrower has not made scheduled payments of principal or interest for a specified period, usually 90 days, or more, according to regulatory standards. An NPL indicates a decreased creditworthiness and poses risks to the lender’s health by virtue of reducing income and increasing the possibility of credit losses. Hence, there can't be too many NPLs in a bank; otherwise, its capital, liquidity, and profitability will go down, signaling instability in the financial sector. Therefore, a proper management and recovery strategy of NPLs can aid the decrease or lessen the impact of NPLs on financial institutions (International Monetary Fund, 2020).

Shares and Debentures

Shares and Debentures mean the placement of money by people or organizations into either stocks (shares) or bonds (debentures) brought out by companies or financial institutions. Shares, which are a type of stock, typically entitle an investor to a proportion of a company's assets that may come in the form of either dividends or capital gains. Investing in shares is a high-risk strategy however, it can potentially lead to higher gains if the company's value zooms through the congeal of capital gains. Debentures are instruments which are naturally fixed-income that is, a loan from the investor to the issuing entity. They give regular interest payments and are relatively less risky than shares, since they do not rely on the company's profitability but its capacity to repay the debt. These kinds of investments aid in diversifying portfolios, creating returns, and financing business capital needs (Stephen Ross, 2019).

Definition of Dependent variable

Return on Assets

Return on Assets (ROA) is a financial performance metric that measures the profitability of a company relative to its total assets. It indicates how efficiently a company uses its assets to generate net income. ROA is expressed as a percentage and is calculated using the formula: A higher ROA signifies better efficiency in utilizing assets to generate profits. ROA is particularly useful in comparing companies within the same industry and assessing how well management uses resources to create value (Huston, 2021).

CHAPTER-IV

RESULTS AND DISCUSSION

The main theme of this chapter is to analyze and interpret the data by using financial and statistical tools. The basic objective of this study is the portfolio management and profitability analysis of the selected development banks. Data collected from various sources were classified and tabulated as requirement of the study and in accordance to the nature of collected data. Different financial and statistical tools are used to analysis the data.

4.1 Results

4.1.1 Investment Operation of the Banks

Investment is the most important function of the bank because investment policy provides several inputs, through which banks can handle their investment operation efficiently and maximize return with, minimize risk which is the success path for the banks. Bank must mobilize it funds to profitable, secured and marketable securities, so that it can earn more profit. Bank must fulfil the credit needs of various sectors of the economy including industry, commercial, social service, securities and agriculture sector:

Nowadays most of the banks depend upon the investment strategies. By which the development banks are playing the vital role in the economic development of the country. This chapter investment operation of development bank deals with the pinpointing analysis related to the investment of the development bank of Nepal in government securities, share and debentures, other investments and loan and advances prepared in various economic sectors.

4.1.1.1 Investment in Government securities

Investment in government securities in Nepal involves purchasing debt instruments issued by the Government of Nepal to finance public expenditures and development projects. These securities, managed and issued through Nepal Rastra Bank (NRB), are considered risk-free due to the government's backing. Key types include Treasury Bills for short-term liquidity management, Development Bonds for long-term projects, and Savings Bonds aimed at encouraging individual savings. Investors range from institutional entities like banks and insurance companies to individual citizens. These securities offer safety, regular income, and potential tax benefits, with

the option to trade in the secondary market via NEPSE. However, limited awareness and low secondary market activity pose challenges to broader participation. Despite this, government securities play a vital role in stabilizing the financial market and supporting Nepal's economic development, making them a secure and strategic investment option.

Table 2

Investment on Government Securities (in millions)

Year	EDBL	MDBL	KSBBL	JBBL	GBBL
2022/23	1,975	21,698	7,310	6,957	14,310
2021/22	553	17,674	6,009	6,219	9,390
2020/21	442	14,227	4,670	6,418	9,802
2019/20	5,135	6,323	5,135	2,184	5,516
2018/19	230	2,246	230	1,096	1,221
2017/18	0	392	190	527	333
2016/17	0	0	80	387	131
2015/16	0	0	50	327	80
2014/15	0	0	0	77	30
2013/14	0	0	0	195	30

(Source: Appendix I)

Table 2 presents government securities investment trends over ten years (2013/14 to 2022/23) by five financial institutions: EDBL, MDBL, KSBBL, JBBL, and GBBL. The trends show a vigorous upward curve. Initially very little investment or even no investments were reported; it was only after this period that a few of the institutions went into investments. However, by 2022/23, all the institutions showed increased investments. The highest investment was reported by MDBL-NPR 21,698 million, with GBBL at a distant second with an investment of NPR 14,310 million. EDBL increased by a significant degree to NPR 1,975 million, while KSBBL and JBBL brought in NPR 7,310 million and NPR 6,957 million, respectively. This increasing trend reflects an understanding of government securities to be a secure mode of investment, investing mainly due to increased assurance and strategy over the last couple of years.

4.1.1.2 Loan and Advance Investment

Loan and Advance Investment is one of the kinds of finance obtained from banks and financial institutions for individuals, businesses, or other entities under specific terms for repayment. Loans are typically made for specific purposes such as purchase of assets, working capital, or personal needs, with clear repayment schedules laid down and charges on interest that can accrue during the period. Advances are shorter-term financial facilities granted to meet urgent cash requirements, usually without strict stipulations on repayments. Loans and Advances form a core part of the Bank's asset portfolio thus remain a very significant source of income with the earning of interest while providing liquidity to various sectors of the economy thereby supporting economic activity**.**

Table 3

Loan and Advance (in millions)

Year	EDBL	MDBL	KSBBL	JBBL	GBBL
2022/23	10,736	96,993	45,547	52,980	63,561
2021/22	10,504	89,539	43,544	49,389	59,226
2020/21	9,372	76,403	39,489	43,824	982
2019/20	7,809	48,265	26,565	30,230	35,426
2018/19	6,369	38,144	19,227	25,127	28,540
2017/18	4,270	25,003	13,170	15,877	18,619
2016/17	3,779	15,159	5,987	8,977	1,283
2015/16	3,129	6,829	5,891	5,892	7,909
2014/15	2,098	6,625	2,527	4,956	5,438
2013/14	1,795	4,378	2,074	4,182	3,458

(Source: Appendix I)

Table 3 presents trends in the loans and advances extended by five banks—EDBL, MDBL, KSBBL, JBBL, and GBBL—for ten years (from 2013/14 to 2022/23), showing steady growth in all institutions. MDBL merits the lead with respect to loans and advances, which show a leap from NPR 4,378 million in 2013/14 to NPR 96,993 million in 2022/23, exhibiting its capability to lend. GBBL has also shown a substantial increase during the same period, from NPR 3,458

million to NPR 63,561 million. KSBBL and JBBL seem to have progressed at a steady pace, having indeed reached NPR 45,547 million and NPR 52,980 million, respectively, now by 2022/23. EDBL, starting from NPR 1,795 million during 2013/14 slowly increased to NPR 10,736 million during 2022/23. Continuing this light upward trend across all institutions indicates the growing importance of loans and advances for economic activity and finance-related demands in Nepal's growing economy.

4.1.1.3 Non-Performing Loan

A nonperforming loan is defined as a loan in which the borrower has failed to service either the principal or interest due on it for an extended period-usually no less than 90 days, depending on various regulatory guidelines. NPLs are seen as distressed assets with more compromising debts with high risk of default, which result in the lending institution suffering huge financial losses. A continuous high ratio of NPLs could mean poor credit risk management or economic instability in the banking sector, usually reaping an adverse effect on banks' profitability, liquidity, and general soundness. The management and reduction of NPLs is, indeed, important to ensure a sound financial environment, and reliance on loan restructuring, asset liquidation like foreclosure, or selling off distressed assets could be viable options to deal with the issue of distressed loans.

Table 4

Non-Performing Loan (in millions)

Year	EDBL	MDBL	KSBBL	JBBL	GBBL
2022/23	534	954	1,444	55	1,116
2021/22	295	192	1,031	51	520
2020/21	361	175	647	46	391
2019/20	218	91	485	31	167
2018/19	202	17	124	68	56
2017/18	26	0	198	64	51
2016/17	39	3	85	88	31
2015/16	35	9	62	383	25
2014/15	24	12	7	100	16
2013/14	34	20	4	115	4

(Source: Appendix I)

Table 4 provides the non-performing loan (NPL) data of five banks (EDBL, MDBL, KSBBL, JBBL, and GBBL) over a ten-year period from 2013/14 to 2022/23. The figure of the NPL is an indication of loans that are not being repaid at the expected times, with the greater figure indicating greater financial risk on the part of the bank. During the years, most banks have seen marked increases in the amount of NPL on their books. EDBL's NPL increased from 34 in 2013/14 to 534 in 2022/23, and MDBL saw NPL grow from 20 to 954 in that period. In most years, KSBBL reported higher NPLs than most banks, peaking at 1,444 in 2022/23. JBBL had fairly low NPLs throughout its operation years, however, it soared ti 383 in 2015/16 and further down to 55 in 2022/23. GBBL's NPL also increased greatly from 4 in 2013/14 to 1116 in 2022/23. This data generally indicates bad trends in repayment performance by these banks and further indicates an increasing challenge in managing credit risk and NPLs.

4.1.1.4 Due from other Bank and Financial Institutions

Due from other banks and financial institutions indicates amounts owing from or receiveable by one bank/financial institution to other banks/financial institutions. This concept encompasses all varieties of interbank loans, deposits, or short-term borrowing arrangements. For example, if a bank lends money to or otherwise holds deposits with other banks or financial institutions, these amounts are classified on the balance sheet as "due from other banks and financial institutions." Such amounts are part of the bank's assets, indicative of expectant receipts from other financial institutions. Another reason these amounts arise is the balances in correspondent accounts, overdrafts, or any other outstanding obligations between financial institutions**.**

Table 5

Due from other bank and financial institutions (in millions)

Year	EDBL	MDBL	KSBBL	JBBL	GBBL
2022/23	428	2,000	2,263	3,411	2,105
2021/22	423	3,750	4,304	3,452	2,036
2020/21	383	5,420	1,106	3,681	2,310
2019/20	0.00	2,322	1,062	1,170	2,756
2018/19	0.00	5,306	1,600	4,544	3,372
2017/18	323	3,576	920	2,323	1,493
2016/17	264	1,764	25	625	712
2015/16	205	48	66	10	81
2014/15	160	13	3	46	90
2013/14	1,795	13	2	120	7

(Source: Appendix I)

Table 5 contains Due from other banks and financial institutions. This shows the due for five banks: EDBL, MDBL, KSBBL, JBBL, and GBBL during a period of the last decade (2013/14-2022/23). This is the amount these banks are owed by the other financial institutions. It shows a fluctuating trend in and across the years for each bank. EDBL went continuously down for 10 years between 2013 and 2023, starting from 1,795 in 2013/14 and ending at 428 in 2022/23. MDBL peaked sharply in 2020/21 at 5,420, falling steeply to 2,000 in 2022/23. KSBBL presented fluctuating figures, peaking out at 4,304 in 2021/22, only later to fall at 2,263 in 2022/23. JBBL was highly varied, with 4,544 in 2018/19 but dropping back to 3,411 in 2022/23. GBBL, by contrast, presented a rather consistent ascent into a high of 2,310 in 2020/21 and also maintained it at an upward 2,105 due in 2022/23. So looking at these amounts, one thing is discernible from the above table: a fluctuation in the amounts due from other banks and financial institutions, yet certain banks like MDBL and JBBL had higher balances when crossed against the others in a particular year, indicating more interactions among themselves. At the same time, those figures have listed considerable contrasting trends in respective financial interactions of these banks with other institutions during the years.

4.1.1.5 Investment on Share and Debenture

Investment in shares refers to the purchase of equity stakes in a company, represented by shares. When a bank or financial institution buys shares in a company, it acquires ownership in that company, giving it the right to vote in shareholder meetings and the potential to receive dividends. The value of shares fluctuates according to the performance of the company and the market, and their gain is from capital appreciation (rise in share price) or from dividends declared. Investment in debentures means to purchase the debt instruments of a company or government. Debentures can be thought of as a type of bond or a formal arrangement whereby the investor lends to the issuer a specific amount for a certain period, for which the issuer agrees to pay a fixed interest, either monthly, quarterly, half-yearly, or yearly. However, the investor is, in general, not a shareholder and does not own shares in the company. Debentures are regarded as a bit less risky than shares, as they carry guaranteed return and repayment of principal at maturity, but they miss out on any chances for capital appreciation which comes with shares.

Table 6

Investment on Share and debenture (in millions)

Year	EDBL	MDBL	KSBBL	JBBL	GBBL
2022/23	2,190	21,854	7,920	8,088	14,919
2021/22	749	17,774	6,261	7,076	9,910
2020/21	636	14,513	4,973	7,587	10,473
2019/20	183	6,593	5,759	2,858	5,749
2018/19	140	2,517	230	1,503	1,391
2017/18	63	704	190	716	504
2016/17	42	167	83	525	189
2015/16	7.36	115	67	128	102
2014/15	0.10	103	1.10	30	40
2013/14	0.10	86	6.10	0.88	31

(Source: Appendix I)

Table 6 depicts the investment in shares and debentures (in million amount) for five banks (EDBL, MDBL, KSBBL, JBBL and GBBL) over the course of the period ten years, from 2013/14 to 2022/23. This is a representation of the amount each bank invests in shares and debentures of other companies or financial institutions. The data speaks volumes for the most significant growth in investment quantities for most banks, especially in the latter years. EDBL's investment witnessed a momentous leap from 0.10 million in 2013/14 to 2,190 million in 2022/23, which is a clear indication of the rise in investment activities. The consistent upward trend is visible for MDBL as well, where the investment jumped from 86 million in 2013/14 to 21,854 million in 2022/23, with a significant increase particularly in the recent years. KSBBL's shows investments steadily rising from 6.10 million in 2013/14 to 7,920 million in 2022/23. The investments of JBBL are considerably variable with a commendable jump to 8,088 million in 2022/23 from 1,391 million in 2018/19. Investment in GBBL's went up from 31 million in 2013/14 to 14,919 million in 2022/23. On the whole, the data is an indicator of substantial rises in investment activities across all banks in the decade time with a considerable upward trend in the recent years. This could mean that banks are getting more and more involved in share and debenture investments as part of the portfolio diversification strategy for returns from capital gains and interest income.

4.1.1.6 Return on Asset

ROA is a financial ratio indicating the efficiency of a company or bank in using its assets to create net income. It reflects the profitability of the organization concerning its total assets and is one of the main indicators of operational efficiency. A higher ROA means the company efficiently uses its assets to produce profit, while a lower ROA suggests that the company may not be using its assets as effectively as it should. ROA has grown over time as a tool to compare the performance of companies within the same industry, since asset management and usage may vary significantly between sectors.

Table 7

Return on Assets

Year	EDBL	MDBL	KSBBL	JBBL	GBBL
2022/23	0.32	0.95	0.58	0.41	1.42
2021/22	0.67	1.11	0.99	0.94	1.29
2020/21	1.00	1.14	1.17	1.11	1.15
2019/20	0.91	1.07	0.33	1.15	1.15
2018/19	1.96	2.34	1.07	1.46	1.53
2017/18	2.48	1.53	1.99	1.27	1.86
2016/17	2.82	2.49	2.14	1.73	1.97
2015/16	2.38	2.79	1.32	1.70	2.10
2014/15	2.13	2.42	2.27	1.39	1.94
2013/14	1.96	2.52	2.09	1.01	2.26

(Source: Appendix I)

Table 7 presents the trend of Return on Assets (ROA) for five banks (EDBL, MDBL, KSBBL, JBBL, and GBBL) for a period of ten years covering 2013/14-2022/23. ROA is a performance measure indicating how well each bank is utilizing its assets to generate profit. The data show a general trend of fluctuating ROA across the banks. ROA fell evidently from EDBL, showing its decreasing ability to generate profits from its assets----slowly all the way down to 0.32% in 2022/23 from 1.96% in 2013/14. Historically a ROA at the top of the banks, MDBL sealed at 2.79% in 2015/16, it nevertheless showed a gradual decline like others that continued into 2022/23 where it posted 0.95%. The ROA of KSBBL steadily declined from 2.09% during 2013/14 to 0.58% at 2022/23. The ROA of JBBL was fairly similar, with a peak in 2018/19 at 1.46% but fluctuated around the 1% mark in recent years and settled down to 0.41% at the end of 2022/23. GBBL showed some slow decrease in ROA from 2.26% in 2013/14 to 1.42% in

2022/23, though there were some years of stagnation in between. As shown in the data, the ROA began to show a tendency for decline in the majority of banks, especially after 2018/19, reflecting a decrease in their efficiency at generating profits from the assets owned. Still, as compared to others, MDBL and GBBL have maintained a fairly superior performance. Various reasons can be assigned as possible explanations for the drop in ROA of many of these banks such as improvement in asset management, some operational inefficiencies, or oblique competition in the banking industry.

4.1.2 Descriptive Statistics

Descriptive Summary of financial metrics typically focuses on key indicators that assess the bank's performance, profitability and valuation. The table shows the descriptive statistics of investment on government securities, loan and advance, Due from other BFIs, non-performing loan and Investment on share and debenture of 5 samples development banks of 10 years observation.

Table 8

Descriptive Statistics of Development banks

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Return on Assets	50	0.3184	2.8186	1.5548	0.6574
Government Securities	50	20	21698	3504.06	4890.685
Loan and Advance	50	1283.4962	96993.4052	23047.7837	23938.0298
Non-performing Loan	50	0.000	1443.784	168.14937	263.464328
Due from other BFIs	50	260.2833	8411.2489	3030.4436	1941.4990
Share & debenture	50	85.7689	21890.6409	4275.5709	5621.7074

(Source: SPSS output)

The table 8 provides descriptive statistics summarizing key financial variables for development banks, offering insights into their central tendencies and variability. The analysis includes Return on Assets (ROA), Investment in Government Securities, Loan and Advance, Non-performing Loan, Due from other BFIs, and Investment in Share & Debenture across 50 observations.

Return on Assets (ROA) has a minimum value of 0.3184 and a maximum of 2.8186, with a mean of 1.5548 and a standard deviation of 0.6574, indicating moderate variability around the average profitability measure**.** Investment in Government Securities ranges widely from 20 to 21,698, with an average of 3,504.06 and a standard deviation of 4,890.685, reflecting significant

disparities among banks in their government security investments. Loan and Advance, a major activity for development banks, varies from 1,283.4962 to 96,993.4052, with a mean of 23,047.7837 and a high standard deviation of 23,938.0298, showing substantial variation in lending activities across banks. Non-performing Loans range from 0.000 to 1,443.784, with a mean of 168.14937 and a standard deviation of 263.464328, indicating considerable variability in the quality of loans. Due from other BFIs ranges from 260.2833 to 8,411.2489, with a mean of 3,030.4436 and a standard deviation of 1,941.4990, suggesting moderate variability in inter-bank placements. Investment in Share & Debenture shows the largest variability, ranging from 85.7689 to 21,890.6409, with a mean of 4,275.5709 and a standard deviation of 5,621.7074, reflecting diverse investment strategies among banks.

4.1.3 Karl Pearson's Correlation Coefficient Analysis

Correlation Analysis was used to determine the strength and direction of the linear relationship between the variables under consideration.

Table 9

Karl Pearson's Correlation Coefficient Metrics

		Return on Assets	Government Securities	Loan and Advance	Non-performing Loan	Due from other BFIs	share & debenture
Return on Assets	Pearson Correlation	1	-.432**	-.486**	-.458**	-.303*	-.600**
	Sig. (1-tailed)	.	.001	.000	.000	.016	.000
Government Securities	Pearson Correlation	-.432**	1	.884**	.439**	.471**	.828**
	Sig. (1-tailed)	.001	.	.000	.001	.000	.000
Loan and Advance	Pearson Correlation	-.486**	.884**	1	.409**	.648**	.742**
	Sig. (1-tailed)	.000	.000	.	.002	.000	.000
Non-performing Loan	Pearson Correlation	-.458**	.439**	.409**	1	.190	.438**
	Sig. (1-tailed)	.000	.001	.002	.	.093	.001
Due from other BFIs	Pearson Correlation	-.303*	.471**	.648**	.190	1	.307*
	Sig. (1-tailed)	.016	.000	.000	.093	.	.015
share & debenture	Pearson Correlation	-.600**	.828**	.742**	.438**	.307*	1
	Sig. (1-tailed)	.000	.000	.000	.001	.015	.

**. Correlation is significant at the 0.01 level (1-tailed).

*. Correlation is significant at the 0.05 level (1-tailed).

The table 9 provides Karl Pearson's correlation coefficients, analyzing the strength and direction of the relationships between Return on Assets (ROA) and five variables: Government Securities, Loan and Advance, Non-performing Loan, Due from other BFIs, and Share & Debenture. The significance values indicate the statistical reliability of these correlations.

ROA shows significant negative correlations with all five variables. The strongest negative correlation is with Share & Debenture ($r = -0.600$, $p = 0.000$), followed by Loan and Advance ($r = -0.486$, $p = 0.000$), Non-performing Loan ($r = -0.458$, $p = 0.000$), Government Securities ($r = -0.432$, $p = 0.001$), and Due from other BFIs ($r = -0.303$, $p = 0.016$). These negative correlations suggest that as these variables increase, ROA tends to decrease. Among the independent variables, Government Securities and Loan and Advance exhibit the highest positive correlation ($r = 0.884$, $p = 0.000$), indicating a very strong relationship. Similarly, Share & Debenture shows strong positive correlations with both Government Securities ($r=0.828$, $p=0.000$) and Loan and Advance ($r = 0.742$, $p = 0.000$), while Non-performing Loan correlates positively with Government Securities ($r = 0.439$, $p = 0.001$) and Share & Debenture ($r=0.438$, $p=0.001$). The weakest correlations are between Non-performing Loan and Due from other BFIs ($r=0.190$, $p=0.093$) and between Due from other BFIs and Share & Debenture ($r=0.307$, $p=0.015$).

In summary, ROA is negatively associated with all predictors, with Share & Debenture having the most substantial inverse relationship. The positive correlations among independent variables suggest interdependencies, particularly between Government Securities, Loan and Advance, and Share & Debenture, which could influence their individual impacts on ROA.

4.1.4 Analysis of Regression Results

Regression analysis may be defined as a statistical method applied to study the relationship between one dependent criterion variable and multiple independent predictor variables. In some applications, this type of analysis is utilized in order to predict the alteration of the dependent variable with changes in independent variables. It can be perceived as how good a predictor your multiple regression is likely to be. It can also be seen that a multiple determination denotes the per cent variation in dependent variables explained by the regression equation. The regression table provides the result of the constant, the coefficient of determination, and the t-value. The coefficient explains the slope of the regression line and indicates how much change will take place in the dependent variable for 1 unit change in the independent variable. Coefficient of

determination (R2) explains how much variation in dependent variable is explained by the independent variable.

Table 10

Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig F. change
1	0.69048	0.4768	0.4173	0.50179	0.4768	8.0182	5	44	0

a. Predictors: (Constant), Investment on share & debenture, Due from other BFIs, Non-performing Loan, Investment on Government Securities, Loan and Advance

The table 10 represents the summary of a regression analysis model that examines the relationship between a dependent variable and five predictors: Investment share & debenture, Due from other BFIs, Non-performing Loan, Investment in Government Securities, and Loan and Advance. The correlation coefficient (RR) is 0.69048, indicating a moderately strong positive relationship between the predictors and the dependent variable. The R^2 value, or coefficient of determination, is 0.4768, meaning approximately 47.68% of the variance in the dependent variable is explained by the predictors in the model. After adjusting for the number of predictors, the Adjusted R^2 reduces slightly to 0.4173, reflecting the proportion of variance explained while penalizing for the inclusion of additional predictors.

The standard error of the estimate is 0.50179, signifying the average deviation of observed values from the regression line. The model's change statistics show an R2R^2 change of 0.4768, with an F-value of 8.0182 and degrees of freedom (df1=5,df2 = 44), indicating the predictors collectively contribute significantly to the model's explanatory power. The significance level (p=0.000) confirms that the predictors have a statistically significant effect on the dependent variable. Overall, the model is meaningful and moderately effective, but there is room to explore additional predictors or refinements to enhance its explanatory power.

Table 11

ANOVA Table

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.09486	5	2.018972	8.018237	0.0000
	Residual	11.07909	44	0.251797		
	Total	21.17395	49			

a. Predictors: (Constant), Investment on share & debenture, Due from other BFIs, Non-performing Loan, Investment on Government Securities, Loan and Advance

b. Dependent Variable: Return on Assets

The ANOVA table summarizes the results of an analysis of variance conducted on a regression model that investigates the impact of five predictors (Investment share & debenture, Due from other BFIs, Non-performing Loan, Investment in Government Securities, and Loan and Advance) on the dependent variable, Return on Assets (ROA). The table partitions the total variation in the dependent variable into two components: variation explained by the regression model (Regression) and unexplained variation (Residual). The Regression Sum of Squares (SS) is 10.09486, which represents the variability in ROA that is explained by the predictors. This is divided by its degrees of freedom (df=5), corresponding to the number of predictors) to calculate the Mean Square Regression, which is 2.018972. The Residual Sum of Squares is 11.07909, representing the unexplained variability in ROA, with df=44 (calculated as the total sample size minus the number of predictors and 1). The Mean Square Residual, derived by dividing the residual sum of squares by its degrees of freedom, is 0.251797.

The Total Sum of Squares is 21.17395, representing the overall variability in ROA, and is the sum of the regression and residual sums of squares. The F-statistic, calculated as the ratio of Mean Square Regression to Mean Square Residual (F = 2.018972 / 0.251797), equals 8.018237. This measures the overall significance of the regression model. With a p-value (Sig.) of 0.0000, the model is statistically significant at any conventional significance level, indicating that the predictors collectively have a significant impact on ROA.

Table 12

Coefficients Table

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	2.0587	0.1406		14.645	0.000
	Government Securities	0.00008	0.00004	0.5981	2.1259	0.0391
	Loan and Advance	-0.00001	0.00001	-0.2792	-0.9774	0.3336
	Non-performing Loan	-0.00065	0.00031	-0.2594	-2.1109	0.0405
	Due from other BFIs	-0.00004	0.00005	-0.1292	-0.8410	0.4049
	Investment share & debenture	-0.00009	0.00002	-0.7353	-3.6398	0.0001

a. Dependent Variable: Return on Assets

The coefficients table provides insights into the impact of five predictors (Government Securities, Loan and Advance, Non-performing Loan, Due from other BFIs, and Investment Share & Debenture) on the dependent variable, Return on Assets (ROA). The constant term (B= 2.0587, p = 0.000) indicates that when all predictors are zero, the ROA is 2.0587, which is statistically significant. Among the predictors, Investment in Government Securities has a positive and statistically significant relationship with ROA (B= 0.00008, p = 0.0391), suggesting that increasing investment in government securities enhances ROA. Conversely, Non-performing Loans (B = -0.00065, p = 0.0405) and Investment Share & Debenture (B = -0.00009, p = 0.0001) have significant negative effects, highlighting their detrimental impact on ROA.

On the other hand, Loan and Advance (B = -0.00001, p = 0.3336) and Due from other BFIs (B= -0.00004, p = 0.4049) exhibit weak and statistically insignificant relationships with ROA, indicating minimal influence. Notably, Investment Share & Debenture has the most substantial negative impact, while Government Securities shows the strongest positive influence. This

analysis emphasizes the need to manage investments strategically, reduce non-performing loans, and reassess the role of debenture and investment shares to optimize ROA.

4.2 Discussion

This study used investment on government securities, Loan and Advance, Non-performing loan, Due from other BFIs, Investment on share and debenture and Return on Assets to find out the financial position of the development banks. This research intends to assess and establish the portfolio management and evaluation of five developmental banks in Nepal: Excel Development Bank, Kamana Sewa Bikas Bank, Jyoti Bikas Bank, Garima Bikas Bank, Muktinath Bikas Bank. The secondary data has been used to obtained data of five years from the development banks websites.

The study aimed to examine the relationship between portfolio management and profitability of development banks in Nepal, focusing on several key objectives. Firstly, it sought to analyze how effective asset management practices influence the financial performance of these banks. The findings revealed a significant positive correlation between investments in government securities and return on assets (ROA), indicating that development banks that strategically allocate resources to government securities tend to achieve higher profitability. Conversely, the study highlighted the detrimental impact of non-performing loans (NPLs) on profitability, establishing a strong inverse relationship between high levels of NPLs and ROA. This underscores the necessity for robust credit risk management practices to mitigate the adverse effects of NPLs on financial performance. The previous studies by Zewdie and Bakalo (2024) found that Product portfolio management enhance the profitability through optimized resources allocation and strengthening the market positioning through competitive advantage. The previous researcher Lekwauwa & Bans- Akutey (2022) emphasizes the importance of effective portfolio management policies, suggesting that management and stakeholders prioritize optimal practices in portfolio management to achieve strategic objectives and maximize profitability. The previous researcher Ugoani (2016) highlights that high rates of nonperforming loans adversely affect the loan growth rate, which in turn negatively affects profitability through the reduction in the volume of loans and the amount of interest income thereon.

The second objective of this research is to analyze the impact of holding government securities on the profitability of development banks, revealing a generally positive influence across the

institutions studied. For Excel Development Bank (EDBL), the investment in government securities has shown a significant increase, reflecting a strategic move towards safer assets that enhance profitability through stable returns. Similarly, Kamana Sewa Bikas Bank (MDBL) has demonstrated a robust investment in government securities, with substantial amounts allocated, which has contributed positively to its financial performance by providing a reliable income stream. Jyoti Bikas Bank (KSBBL) has also benefited from its investments in government securities, as these low-risk instruments have helped stabilize its earnings amidst market fluctuations. Garima Bikas Bank (GBBL) has seen a marked increase in its holdings of government securities, which has bolstered its profitability by ensuring consistent returns and reducing exposure to higher-risk assets. Lastly, Muktinath Bikas Bank (JBBL) has strategically utilized government securities to enhance its liquidity and profitability, showcasing the effectiveness of this investment strategy in maintaining financial health. Overall, the study highlights that the strategic allocation of funds to government securities across these banks not only mitigates risk but also significantly contributes to their profitability, underscoring the importance of such investments in their overall portfolio management strategies.

Additionally, the research analyzed the effects of loans and advances, shares and debentures, and due from other financial institutions on the profitability of development banks. Loans and advances are identified as crucial for generating income, representing a significant portion of the banks' assets; however, their management is critical, as excessive non-performing loans (NPLs) can adversely affect financial performance. While loans are essential for income generation, careful management is necessary to prevent high levels of NPLs that could jeopardize the bank's financial health. Additionally, investments in shares and debentures are highlighted as important for providing opportunities for capital appreciation and income through dividends or interest payments. A well-managed portfolio in this area can enhance profitability by diversifying income sources and mitigating risk, although market conditions can influence performance. Furthermore, the category of due from other financial institutions, which includes expected funds from other banks, is emphasized for its role in enhancing liquidity and providing additional income. Maintaining a healthy balance in this area can positively impact profitability by ensuring access to funds and effective liquidity management. The previous researcher Mishra et al (2021) concluded that there is a negative relation between ROA and ROE with loan ratio, deposit ratio and capital ratio, while there is positive relation with bank size and inflation. The previous study

by Rabian (2021) conclude that proper portfolio management will improve the financial performances of deposit money banks. Accordingly, it recommends improved liquidity monitoring and better utilization of loan/deposit ratios employed by banks, in order to achieve a decline in the levels of non-performing loans. The previous researcher Ugoani (2016) found that high level of non-performing loans adversely affects the loan growth rate which negatively impacts bank's profitability by reducing both amount of loans and interest income.

Furthermore, the research identified the challenges faced by development banks, such as limited access to capital markets and regulatory constraints imposed by the Nepal Rastra Bank, which often restrict their investment strategies. These challenges necessitate a dynamic approach to portfolio management, where banks must continuously adapt their strategies to align with changing economic conditions and regulatory frameworks. Overall, the study provides valuable insights into the significance of effective portfolio management practices in enhancing the profitability and stability of development banks in Nepal, ultimately contributing to the broader economic development of the country.

CHAPTER V

SUMMARY AND CONCLUSION

5.1 Summary

The study aims to investigate the relationship between portfolio management and profitability of development banks in Nepal, focusing on how effective asset management practices influence financial performance. It highlights the critical role of development banks in stabilizing the national economy by funding key sectors such as agriculture, infrastructure, and small businesses. The research employs a descriptive methodology, utilizing secondary data from annual reports and financial statements of selected banks over a ten-year period. Key findings reveal a significant positive correlation between investments in government securities and return on assets (ROA), indicating that banks that strategically allocate resources to these low-risk instruments tend to achieve higher profitability. Conversely, the study identifies a strong inverse relationship between non-performing loans (NPLs) and ROA, emphasizing the need for robust credit risk management to mitigate the adverse effects of high NPLs on financial performance. Additionally, the research assesses the impact of loans and advances, shares and debentures, and due from other financial institutions on profitability, revealing that while loans are essential for income generation, their management must be approached cautiously to avoid excessive NPLs. The study underscores the importance of diversification in investment portfolios to manage risks associated with economic fluctuations and sector-specific downturns. It also addresses the challenges faced by development banks, such as limited access to capital markets and regulatory constraints, which necessitate a dynamic approach to portfolio management. Overall, the study provides valuable insights into the significance of effective portfolio management practices in enhancing the profitability and stability of development banks in Nepal, ultimately contributing to the broader economic development of the country. The findings advocate for strategic investment approaches that prioritize diversification and robust risk management to ensure financial sustainability and resilience in the face of economic challenges.

5.2 Conclusion

This study underscores the vital importance of effective portfolio management in enhancing the profitability and financial stability of development banks in Nepal. The research demonstrates a

clear and significant relationship between various investment strategies and the banks' financial performance, particularly highlighting the positive impact of investments in government securities on return on assets (ROA). Conversely, the study reveals the detrimental effects of non-performing loans (NPLs) on profitability, emphasizing that higher levels of NPLs can severely hinder a bank's earnings potential. This finding points to the necessity for development banks to implement robust credit risk management practices to mitigate the risks associated with loan defaults. Furthermore, the analysis indicates that while loans and advances are crucial for generating income, their management must be approached with caution to prevent excessive NPLs that could jeopardize financial health. The study also advocates for diversification in investment portfolios as a strategic approach to managing risks linked to economic fluctuations and sector-specific downturns. By diversifying their investments across various asset classes, development banks can enhance their resilience and ensure sustainable growth. Additionally, the research highlights the challenges faced by these banks, including regulatory constraints and limited access to capital markets, which necessitate a proactive and adaptive approach to portfolio management. Ultimately, the findings of this study provide valuable insights for development banks, policymakers, and stakeholders, emphasizing the need for strategic investment practices that prioritize risk management and diversification to foster long-term profitability and contribute to the overall economic development of Nepal. The study serves as a foundation for further research in this area, encouraging ongoing exploration of effective portfolio management strategies within the context of Nepal's dynamic banking sector.

5.3 Implications

The implications of the study are significant for various stakeholders in the banking sector and the broader economic landscape of Nepal. Firstly, for development banks, the findings underscore the necessity of implementing effective portfolio management strategies that prioritize diversification and robust risk management practices. By doing so, banks can enhance their profitability and reduce the adverse effects of non-performing loans, thereby ensuring financial stability and sustainability.

Secondly, the study provides valuable insights for policymakers and regulatory bodies, such as the Nepal Rastra Bank, highlighting the need for supportive frameworks that encourage sound investment practices among development banks. This could involve establishing guidelines for

risk assessment and management, as well as promoting awareness of the importance of diversifying investment portfolios to mitigate risks.

Additionally, the research serves as a resource for academic scholars and students, contributing to the existing literature on portfolio management and financial performance in the banking sector. It opens avenues for further research on the impact of specific investment strategies on bank performance, particularly in emerging markets like Nepal.

Lastly, the implications extend to investors and stakeholders in the financial sector, as the study emphasizes the importance of informed decision-making based on comprehensive portfolio analysis. By understanding the dynamics of investment strategies and their effects on profitability, stakeholders can make better investment choices that align with their risk tolerance and financial goals. Overall, the study advocates for a more strategic approach to portfolio management in development banks, which is essential for fostering economic growth and stability in Nepal.

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Appendix-I

1. Government Securities

Year	EDBL	MDBL	KSBBL	JBBL	GBBL
2022/23	1,975,330,488	21,698,495,679	7,310,084,980	6,956,733,588	14,309,942,071
2021/22	552,871,524	17,673,746,464	6,008,572,900	6,218,554,310	9,390,100,453
2020/21	441,759,582	14,227,011,329	4,670,000,000	6,418,305,633	9,801,534,853
2019/20	5,134,819,106	6,322,914,736	5,134,819,106	2,183,717,015	5,515,769,166
2018/19	230,336,791	2,246,448,061	230,336,791	1,096,439,500	1,220,566,116
2017/18	0	392,150,000	190,000,000	527,200,000	332,614,502
2016/17	0	0	79,890,850	387,200,000	131,266,557
2015/16	0	0	50,000,000	327,200,000	80,000,000
2014/15	0	0	0	77,200,000	30,000,000
2013/14	0	0	0	194,533,395	30,000,000

(Source: Annual Report)

2. Loan and Advance

Year	EDBL	MDBL	KSBBL	JBBL	GBBL
2022/23	10,735,678,354	96,993,405,222	45,546,816,267	52,980,360,490	63,561,184,263
2021/22	10,504,069,541	89,538,748,188	43,544,119,531	49,389,126,078	59,226,430,663
2020/21	9,372,491,617	76,402,863,238	39,489,258,410	43,824,027,714	982,466,787
2019/20	7,809,149,050	48,264,804,611	26,565,295,982	30,230,312,971	35,425,574,578
2018/19	6,369,065,352	38,144,321,489	19,226,612,840	25,127,345,635	28,539,694,749
2017/18	4,270,412,361	25,003,027,777	13,170,143,706		

				15,877,454,393	18,618,910,774
2016/17	3,778,526,837	15,159,394,994	5,986,881,897	8,976,740,514	1,283,496,239
2015/16	3,129,035,876	6,829,306,000	5,891,348,742	5,891,664,458	7,909,148,703
2014/15	2,098,275,728	6,625,259,805	2,527,309,361	4,956,496,649	5,437,744,317
2013/14	1,795,130,138	4,377,596,103	2,074,056,937	4,182,258,351	3,458,052,990

(*Source: Annual Report)*

3. Non-Performing Loans

Year	**EDBL**	**MDBL**	**KSBBL**	**JBBL**	**GBBL**
2022/23	533,908,000	953,833,390	1,443,784,219	54,840,416	1,115,680,027
2021/22	295,492,000	191,741,850	1,031,442,118	51,262,993	520,453,141
2020/21	360,726,054	175,296,350	646,884,348	46,091,512	391,088,678
2019/20	217,762,311	91,078,110	484,800,842	30,705,791	167,453,990
2018/19	201,576,224	17,142,330	124,017,686	68,294,575	56,490,777
2017/18	25,737,682	**0**	197,663,789	63,813,589	50,709,815
2016/17	38,937,682	2,889,373	84,995,163	87,967,169	30,564,776
2015/16	34,807,168	9,109,775	61,903,269	382,714,303	24,557,380
2014/15	24,131,679	12,445,234	7,383,421	100,106,381	15,836,576
2013/14	34,352,109	19,909,901	3,609,550	114,922,050	4,052,827

(*Source: Annual Report)*

4. Due from Other Bank and Financial Institutions

Year	EDBL	MDBL	KSBBL	JBBL	GBBL
2022/23	427,942,688	1,999,547,189	2,263,444,306	3,411,248,945	2,104,520,294
2021/22	422,547,729	3,750,284,110	4,303,589,712	3,452,415,066	2,035,638,564
2020/21	383,040,150	5,419,586,925	1,106,024,820	3,681,297,529	2,309,707,201
2019/20	0	2,322,270,747	1,061,544,497	1,169,848,104	2,755,650,877
2018/19	0	5,305,848,132	1,599,755,943	4,543,732,419	3,371,683,211
2017/18	323,077,626	3,576,161,109	919,758,084	2,322,915,969	1,492,594,229
2016/17	263,634,236	1,763,633,808	25,000,000	625,396,722	712,463,407
2015/16	205,160,734	48,306,899	66,234,808	10,318,572	81,100,320
2014/15	160,283,267	13,499,746	2,872,246	46,113,667	90,223,902
2013/14	1,795,130,138	12,761,326	1,983,451	119,695,244	6,559,378

(Source: Annual Report)

5. Share and Debenture

Year	EDBL	MDBL	KSBBL	JBBL	GBBL
2022/23	2,189,640,886	21,854,045,679	7,920,492,163	8,087,547,034	14,918,548,504
2021/22	748,562,865	17,773,746,464	6,261,364,873	7,076,198,079	9,909,527,832
2020/21	635,544,181	14,513,402,926	4,972,529,625	7,587,482,016	10,473,161,475
2019/20	183,263,328	6,592,808,543	5,759,416,103	2,858,027,113	5,749,373,568
2018/19	140,401,435	2,516,853,930	230,336,791	1,502,595,081	1,390,879,576
2017/18	62,590,652	703,554,116	190,000,000	716,056,242	503,858,156
2016/17	41,621,889	166,920,948	82,732,750	525,226,131	189,485,870

2015/16	7,363,516	114,959,653	66,996,480	128,278,230	101,960,058
2014/15	100,000	103,471,549	1,100,000	30,084,640	39,982,970
2013/14	100,000	85,768,943	6,100,000	883,900	30,899,340

(Source: Annual Report)

6. Return on Assets

Year	**EDBL**	**MDBL**	**KSBBL**	**JBBL**	**GBBL**
2022/23	0.32	0.95	0.58	0.41	1.42
2021/22	0.67	1.11	0.99	0.94	1.29
2020/21	1.00	1.14	1.17	1.11	1.15
2019/20	0.91	1.07	0.33	1.15	1.15
2018/19	1.96	2.34	1.07	1.46	1.53
2017/18	2.48	1.53	1.99	1.27	1.86
2016/17	2.82	2.49	2.14	1.73	1.97
2015/16	2.38	2.79	1.32	1.70	2.10
2014/15	2.13	2.42	2.27	1.39	1.94
2013/14	1.96	2.52	2.09	1.01	2.26

(Source: Annual Reports)

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Abstract This study investigates the relationship between portfolio management and the profitability of development banks in Nepal, with a focus on how effective asset management practices can influence financial performance. Employing a