

Saving and Credit Mobilization and Financial Performance of Microfinance Companies in Nepal

A Dissertation submitted to the Office of the Dean, Faculty of Management in partial
fulfilment of the requirements for the Master's Degree

by

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Certification of Authorship

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled “**Saving and Credit Mobilization and Financial Performance of Microfinance Companies 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 the dissertation.

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Report of Research Committee

Miss Punam Khadka has defended research proposal entitled “**Saving and Credit Mobilization and Financial Performance of Microfinance Companies 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. Dr. Kapil Khanal and submit the thesis for evaluation and viva voce examination.

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Approval Sheet

We, the undersigned, have examined the thesis entitled “**Saving and Credit Mobilization and Financial Performance of Microfinance Companies in Nepal**” presented by Punam Khadka 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 thesis is worthy of acceptance.

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Punam Khadka

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ABBREBIATIONS

BOD	:	Board of Directors
C.V.	:	Coefficient of Variation
CAR	:	Capital Adequacy Ratio
CRR	:	Cash Reserve ratio
DR	:	Debt Ratio
FIRST	:	First Microfinance Laghubitta Bittiya Sanstha Limited
FS	:	Firm Size
GDP	:	Gross Domestic Product
GLBSL	:	Gurans Laghubitta Bittiya Sanstha Limited
LC	:	Letter Of Credit
NRB	:	Nepal Rastra Bank
ROA	:	Return on Assets
ROC	:	Registrar of Companies
ROE	:	Return on Equity
RSDC	:	RSDC Laghubitta Bittiya Sanstha Limited
S.D	:	Standard Deviation
SKBL	:	Sana Kishan Bikas Lagubitta Bitiya Limited

ABSTRACT

This study aims to explore the impact of financial factors on the performance of microfinance institutions in Nepal. Effective liquidity management within these institutions requires a structured approach to decision-making concerning liquidity risk control, including appropriate funding strategies, exposure limits, and emergency liquidity allocation protocols. Liquidity considerations encompass both the public's trust and the firm's daily operations. A lack of sufficient cash or liquidity signals deeper financial issues and crises within the institution, sending a negative message to both individuals and businesses.

The variables examined in this study include the debt ratio (DR), firm size (FS), cash reserve ratio (CRR), capital adequacy ratio (CAR), return on assets (ROA), and return on equity (ROE) for microfinance institutions. DR, FS, CRR, and CAR are treated as independent variables, while ROA and ROE serve as dependent variables in the analysis. Secondary data for this research were collected from the annual reports of authorized companies over a span of ten years, from 2070/71 to 2079/80. The data were processed and evaluated using SPSS version 24, employing descriptive, exploratory, and explanatory research methods. A sample of four microfinance companies was selected from a total of 55 through convenience sampling. The companies involved are First Microfinance Laghubitta Bittiya Sanstha Limited, Sana Kisan Bikas Laghubitta Bittiya Sanstha Limited, Gurans Laghubitta Bittiya Sanstha Limited, and RSDC Laghubitta Bittiya Sanstha Limited. This research relies on secondary data, with ordinary least square (OLS) regression being a key method in panel data analysis. There is a significant positive correlation between firm size and ROE, as well as a strong positive relationship between CRR and ROA. However, the cash reserve ratio and debt ratio show little connection to return on equity (ROE). The findings of this study could assist lawmakers and bankers in formulating effective policies to enhance the profitability of the financial sector.

Key Words: Microfinance Companies, ROE, ROA, debt ratio, firm size, CRR, CAR

CHAPTER-I

INTRODUCTION

1.1 Background of the Study

Most banking organizations have failed to ensure the adequate management of the credit facilities they advance to their customers. This dereliction in their credit management have resulted to incidences such as default in loan payment, bad debts as well as other unfortunate occurrences. For financial institutions, risk management remains a keen challenge in their business operations due to the microfinances inability to rightly predict the events likely to occur in their business space Feridun (2006). Available evidence within the West Africa Sub-region suggests that banking institutions are not out of these risk management woes yet Boye (2014). For instance, Boye (2014) found out that in spite of the well-known credit risk that financial organizations have to deal with in their operations, other risks types namely; trade financing, foreign exchange transactions, financial futures, options, bonds, equities, swaps and in the extension of commitments and guarantees have all been established as other of forms of risks banks have to deal with in order to remain sustainable.

Saving Mobilization is one of the essential tools for the economic development of an underdeveloped and developing countries rather than the developed countries. It is because the developed countries deposit collections for capital formation and is easy due to the developed capital market in every sector. Low national income, low per capita income, lack of technical knowledge, vicious cycle of poverty, lack of irrigation and fertilizers, pressure of population increase, geographical conditions etc. are the main problems of developing countries like Nepal. Hence effective and efficient deposit mobilization could be very significant tool for sound economic development. Banking thus increase the supply of funds by collecting lodgments from public and then combining with them with its capital and reserve fund.

MFI is type of banking service that is provided to unemployed or low income individuals or group who would otherwise have no other means of gaining financial services. Ultimately the goal of micro finance is to give low income people an opportunity to become self-sufficient by providing a means of saving money, borrowing money and insurance Brigham (2008). To undertake proper mobilization of funds, financial institutions practices

credit management. Credit management means the total process of lending starting from inquiring potential borrowers up to recovering the amount granted. In banking sector and other financial institution, credit management is concerned with activities such as accepting application, loan appraisal, loan approval, monitoring, recovering of non-performing loans Smithson (2003). Currently there are many licensed MFI in Nepal specifically around 63 micro finance intuition branches in Nepal working in both rural and urban areas.

Main Core functions of Microfinance program is saving and Credit Management. Access to finance, in other words provides credit for the betterment of underprivileged people enhancing their living standard, increase income generation activities with their involvement and engagement in the enterprise and business activities are essential change making agents. Credit Analysis, understanding the business environment, selection of right enterprise, marketing skills and more assurance that the loan is repaid back is indispensable for microfinance Institutions (MFIs). Credit Management deals with credit appraisal lending process and understanding inherent risk of the loan Hary (2003).

Credit analysis is the method by which one calculates the creditworthiness of a business or organization. The audited financial statements of a large company might be analyzed when it issues or has issued bonds. A financial institution may analyze the financial statements of a small business before making or renewing a commercial loan. The term refers to either case, whether the business is large or small Agene (2011).

Credit analysis involves a wide variety of financial analysis techniques, including ratio and trend analysis as well as the creation of projections and a detailed analysis of cash flows. Credit analysis also includes an examination of collateral and other sources of repayment as well as credit history and management ability Nwankwo (1991).

The credit policy is the primary means by which senior management and the board guide lending activities. Although the policy primarily imposes standards, it also is a statement of the bank's basic credit philosophy. It provides a framework for achieving asset quality and earnings objectives, sets risk tolerance levels, and guides the bank's lending activities in a manner consistent with the bank's strategic direction. Credit policy sets standards for portfolio composition, individual credit decisions, fair lending, and compliance management.

Credit management is the process of granting loan, the terms it's granted on and recovering this loan when it's due. This is the function within a microfinance or company to control loan policies that will improve revenues and reduce financial risks. The purpose of the credit management policy is to define rules on all steps that are likely to generate business risk by committing financial resources. This is done in order to manage this risk and to minimize them. Well managed, a risk can become an opportunity.

Management is the system, which helps to complete the every job effectively. Credit management is also the system, which helps to manage loan effectively. In other words, credit management refers management of loan exposures arising from loans, corporate bonds and loan derivatives. Credit exposures are the main source of investment on Microfinance companies and the return from such investment is supposed to be the main source of income Pradhan (1994).

In the case of developing countries such as our country Nepal, most of the population depends on traditional agriculture practice(hand to mouth farming) with very low know how on returning the credit taken MFI's on time and with few or no income generation on their activity. Besides of this, there might be arise various reasons such as lack of good credit management policy, difficulties of determining the credit worthiness or gathering of information about the debtors by the creditors to extend credit, Creditors weak supervision process, weak collection efforts after loan by creditors may arise in most MFIS.

1.2 Problem Statement

According to Adamu, Asongo and Nyor (2014) microfinance institutions and other non-financial institutions provide small forms of credit to individuals and who may not have collaterals to request for loans from Microfinance companies. Hence, microfinance appears to fill the gap by serving the segment of the markets that traditional banks have woefully failed to meet their financial needs. However, a significant impediment associated with this market segment is how microfinances institutions will be able to effectively manage the concentration risk associated with these segments in order for them to remain within their regulatory framework as well as meet their shareholder's needs.

Agene (2011) described credit risk as the weakening in credit advances units that eventually culminate into credit losses and high non-performing loans and management costs. Unfortunately, Agene (2011) posits that these occurrences are mostly common with non-traditional banks of which microfinance institutions are no exception.

Micro Finance in Nepal have been facing various challenges and problems specially in lending. The problem in lending is rising due to an economic condition of the country, variation in government policies and due to the default borrowers. However the country had stepped in liberal economy and world trade organization, but still this sectors are not able to grab the opportunities or advantages from them. In context of Nepal, many financial institution are facing huge loss by lending. In this study, RMDC Laghubitta Bittiya Sanstha Ltd and Sana Kishan Bikas Laghubitta Bititya Sanstha Ltd. are not aloof from that situation. Still there is the trend of giving consortium loan for a big project so to minimize risk.

Admittedly, the issue of credit risk has become a topical issue in policy debates due to their impact they have on financial institutions operations, nonetheless as posited by Apanga, Appiah and Arthur (2016) there seems to be relatively scant research on this topic mostly within developing countries. Though some earlier studies have sought to address this gap in the literature by measuring credit risk management within developing economies, for instance, Boahene, Dasah and Agyei (2012) similarly assessed credit risk management impact on Microfinance companies performance and Adjirackor, Oppong, Agarwal, Akuma and Gagakuma (2016) on their part measured credit risk management of Microfinance companies. However, most of these studies either concentrated on Microfinance companies or rural financial institutions with no emphasis on microfinance institutions. Hence, there is gap in the literature with regards to credit risk management of microfinance institutions. The major statements to be analyzed in this study will definitely be the credit management adopted by microfinance.

This study highly focused on following statements.

- How efficient these finance are managing their relative credit position?
- What is the relationship of Debt ratio, Firm size, cash reserve ratio and capital adequacy ratio, ROA and ROE of sample micro finance?
- What is the effect of Debt ratio, Firm size, cash reserve ratio and capital adequacy ratio on ROE and ROA of sample microfinance?

1.3 Objectives of the Study

The objectives of the study are as follows:

- To assess the structure of Debt ratio, Firm size, CRR, CAR, ROA and ROE of microfinance companies.
- To examine the relationship between Debt ratio, Firm size, CRR, CAR, ROA and ROE of microfinance companies.
- To analyze the impact of Debt ratio, Firm size, CRR and CAR on ROA and ROE of microfinance companies.

1.4 Rationale of the Study

Microfinance in developing countries like Nepal have the greatest responsibility towards the economic development of the country. The main objective of the organization is to maximize the surplus by the efficient use of its fund and resources. Being a microfinance, it also has a responsibility towards the socio economic up-liftmen of the country by providing specially considered loans and advances towards less privileged sectors. The study has various significant. The micro finance institutions will benefit from the study as they will gain knowledge on impact of credit risk management on performance of Microfinance Institutions.

The study will present varied practices which can be shared by many Microfinance Institutions in the industry. The study will be of great importance to the government through the regulatory agency as it would help in designing policy pertaining to the lending of Deposit Taking MFIs in the country. Finally, the study would contribute to the broader realm of business and academic research. In business, through its recommendations, the study would add value to better credit management practices in businesses and service quality. In academia, the studies will be significant to academic research in the broader area of credit risk management practices and provide a foundation for future studies. This study no doubt will have importance to various groups of people but in particular it is directed to certain group of people which are:

Importance to shareholders

Stockholders can prevent takeover attempts effectively by deeming the offered price inadequate. Therefore, wielding influence over various facets of a company's operations,

shareholders significantly impact its overall Performance and profitability.

Importance to customers

No matter the industry or the products and services offered, your customer remains the cornerstone of your business. Sales depend entirely on their presence, making them pivotal in shaping your marketing approach and strategy.

Importance to financial institution and stock exchange

Financial markets might appear complex, but fundamentally, they serve as a nexus where individuals come together, facilitating the movement of capital to where it is most required. These markets enable companies to secure funding for hiring, investment, and expansion. They also support government funding for infrastructure projects like roads, schools, and hospitals.

Importance to government bodies and policy makers

Government policies outline the rationale and procedures for specific actions, addressing various origins of public issues with tailored responses. Many policies are instituted by governments to regulate businesses.

Importance to the institutes

Institutions also play a crucial role in redistributing resources within the economy, ensuring proper allocation and safeguarding the economically disadvantaged. Additionally, they foster trust through policing and justice systems that uphold a unified legal framework.

Importance to the researchers

Research serves several essential functions: informing action, providing evidence for theories, and advancing knowledge within a particular field of study. It plays a crucial role in enhancing comprehension and decision-making. Research is invaluable for unraveling the intricacies of issues, debunking falsehoods, validating truths, and establishing a foundation of reliable and authentic knowledge. Conducting research fosters deeper insights and strengthens the ability to make informed decisions.

1.5 Limitations of the Study

The study has some limitations. The main limitations of the study are as follows:

- There are 55 microfinance operating in Nepal up to now, but only four micro finance i.e. Nepal First Microfinance Laghubitta Bittiya Sanstha Limited, Sana Kisan Bikas Laghubitta Bittiya Sanstha Limited, Gurans Laghubitta Bittiya Sanstha

Limited (GLBSL) and RSDC Laghubitta Bittiya Sanstha Limited are taken for the study.

- This study concentrates only on non-performing loan and loan loss provision and ignores the other financial aspects.
- The period of the study is limited from fiscal year 2070/71 to 2079/80.
- The study is basically based on secondary data, articles, publication and journals of the respective finance.
- In this study, only selected financial, statistical tools and techniques are used.

CHAPTER- II

LITERATURE REVIEW

It is concerned with review of literature relevant to the topic 'Financial Performance of Microfinance companies. The purpose of reviewing of literature is to develop some expertise in one's area, to see what new contribution has made and to receive some ideas for developing a research design. Thus, previous studies cannot be ignored as they provide the foundation of the present study. This chapter highlights the literature that is available in concerned subject as to my knowledge, research work, and relevant study on this topic, review of journals and articles and review of thesis work performed previously. Under this topic the following subject matter are reviewed.

- Theoretical Review
- Empirical Review

2.1 Theoretical Review

2.1.1 Portfolio Theory

The Portfolio Theory often described as modern portfolio theory. For a long time financial institutions have been faced with credit defaults. Having been pioneered by Harry Markowitz in 1952, the Modern portfolio theory is widely used in the banking sector as well as the MFIs. Most of the MFIs are using the value at risk along with portfolio at risk to handle exposure brought about by interest rate and market dynamics. This theory lets investors assess the expected risk and return in their investment portfolios Wong (2013). 14 MPT is a refined investment approach that has turned out to be concept financial institutions and investors build their asset portfolios. Markowitz quantified exposure and demonstrated quantitatively the reduction of risk by portfolio diversification thus increasing return on investment for investors. Modern Portfolio Theory allows investors to project the risk exposure that they face as well as the expected return by using a statistical measure for their asset portfolios. Markowitz (1952) illustrated on how to merge assets to come up with efficiently diversified portfolios. This theory established that most investors were unsuccessful in accounting appropriately the lofty correlation between security incomes. The theory suggests that a portfolio's exposure can be abridged and the projected rate of return amplified, whilst securities with divergent value actions are pooled together. Markowitz concluded that diversification decreases exposure if securities are pooled

together, and the prices of these securities shift inversely, or at dissimilar period, in regards to each other.

2.1.2 Value at Risk Theory

This theory is employed in estimating the likelihood of portfolio losses based on the arithmetical investigations of past price drifts and unpredictability. Banks in addition to investment firms usually use as it has the ability to quantify risk while it occurs. It is an important consideration for firms when making trading and hedging decisions (Kaplanski & Levy, 2013). Value at Risk can be measured using three variables namely, the sum of potential loss, the probability of that sum of loss, and the time period. The relevance of this theory to this study is that it aids in quantifying credit risk arising from the non-performing loans and portfolios at risk in relation to financial stability of MFIs. This theory also aids in identifying the relevant risk factors affecting the various portfolios of MFIs.

2.1.3 Liquidity Risk Theory

Liquidity risk is a major exposure that precedes any relentless market catastrophe. It is argued that it is the definitive indicator that leads to the explosion of credit risks in addition to market risks, and it is referred to as the means, which modifies remote loss dealings into widespread collapses of financial institutions. The unmatched crisis in the United States mortgage market in 2007 makes no exception. Acerbi and Scandolo (2007) depicts that any financial institution should be in a position to classify as well as categorize the liquidity risk to which it is exposed. In the case of microfinance institutions, their liquidity requirements along with the sources of liquidity on hand to convene these requirements rely extensively on the institutions dealings, product portfolio, cash flows reports as well as their balance sheet makeup. Therefore, it is required of any financial institution to evaluate its liquidity position to avoid a declining effect on its earnings and capital. The relevance of this theory to this study is that, it aids in quantifying the liquidity risk arising from non-performing loans and portfolios at risk consequentially affecting the 16 financial stability and performance of MFIs. This theory also aids in identifying the relevant changes in revenue and capital affecting the overall stability of the MFIs.

2.1.4 Joint liability theory

Joint liability as a theory can be interpreted in several ways which can broadly be grouped under two categories. First, under explicit joint liability, which can occur when one

borrower cannot repay a loan, group members are contractually required to repay in the member's stead. Such repayments can be enforced through the threat of common punishment, typically the denial of future credit to all members of the defaulting group, or by drawing on a group savings fund that serves as collateral (Banerjee, et al, 1994). Second category of the concept of joint liability is implicit, which is to say that, a believe among the borrowers that, if a group member defaults, the whole group will become ineligible for future loans even if the lending contract does not specify this punishment. One form in which this can happen is if the microfinance organization itself chooses to fold its operations when faced with delinquency (Banerjee, et al, 1994).

2.1.5 Poverty lending model

According to Honohan (2004), the poverty lending approach focuses on reaching the poorest of the poor, who are typically engaged in pre-entrepreneurial activities that are more focused on consumption than productivity enhancing activities. This group requires assistance in the form of income transfers to meet their basic needs, because any credit extended to them will most probably be consumed rather than invested in something that generates a return sufficient to repay the debt (Rosenberg, 2003).

This approach differs from the minimalist financial services model Characterized by the financial systems approach. In addition to microfinance services, it provides ancillary services such as training on nutrition, better farming techniques, family planning, health and basic financial management skills aimed at reducing the target group's vulnerability to avoidable risk. The funding for these ancillary services is typically provided by governments, donor grants and other subsidized funds. Previously, loan portfolios used to be funded by donors and governments and loan provision was subsidized at below market interest rates. However, increasing evidence that the microfinance target group repayment rates are not affected by market related interest rates has changed the practice of subsidizing interest rates. In addition the use of 'forced savings' has reduced the extent to which donors and governments are required to fund loan portfolios, even if the microfinance target group is not able to save, initially (Rosenberg, 2003).

Practices have been adopted to ensure that the provision of ancillary services that target those in the pre-entrepreneurial group is done without compromising the financial sustainability of the microfinance function of the institution. This is done by making a clear

distinction between the funds allocated to services. Member savings are used to fund the former, while government and donors support is used to fund the latter (Honohan, 2004).

2.1.6 Endogenous growth theory - education / human capital theory

The endogenous growth theory emphasizes the importance of human capital for the economic growth in a country. The model includes knowledge as a type of capital, which leads to that the production function which does not exhibit diminishing return on capital. In the endogenous growth model, both savings and investments in human capital can lead to persistent growth. Neo-classical growth theories as the Solow model also points out human capital as one of the factors affecting CAR capita growth (Lipsey et al., 2009). Todaro et al. (2003) along with many other economists' argues that it is the human resources of a nation that determine its economic and social development. Both education and health are part of the human capital, which leads to that both aspects are fundamental in order to develop a country. The two aspects are closely related since school attendance relies on good health.

In the literature treating microfinance and education, there are several ways in which microcredit affect human capital. Maldonado (2005) has divided the effects into five categories: that is Income effect. An increase in income lowers the opportunity cost of sending the children to school. (Behrman, 1999) This implies that if the microfinance leads to an increase in the household's income, the children should be sent to school to a larger extent than before since the return to primary school is high i.e. the income elasticity on the demand for schooling is positive (Maldonado, 2005). Risk-management effect happens since poor individuals are vulnerable to external shocks, an adverse income shock often leads to that children enrolled in schooling are taken out of school. Access to microcredit can help smoothen the consumption and increase the household's capability to foresee and handle income shocks, which lead to a lower probability of taking the children out of school (Behrman, 1999). There is also the effect of gender. Various studies has shown that women prioritize their children to a larger extent than men and microcredit given to women thus affect the children's schooling to a higher degree than credits given to men (Maldonado, 2005).

Information effect happens because many households in developing countries may take short term decisions due to imperfect information about opportunities. If microcredit

programs increase information and change the awareness about opportunities, they can contribute to households taking long term decisions, for example taking into account the high return on primary schooling. One example is credit programs that combine financial services with education. This education of the program participants may change the preferences about schooling their children.

2.2 Empirical Review

Khan, Goswami and Choudhury (2024) examined on the microfinance institutions (MFIs) operate to achieve twin objectives: financial and social. South Asian MFIs have a major industry share in terms of clients and loan portfolios. The objective of this paper is to examine the dual goals (financial and social) of MFIs operating in South Asia. The authors incorporate bootstrap data envelopment analysis to measure bias-corrected efficiency scores. Additionally, to account for technological heterogeneity, we have opted for a meta-frontier approach. The authors also estimated the technology gap ratios and relative inefficiencies of individual MFIs. Our results confirm that MFIs in the South Asian constituency are inclined towards financial goals rather than social outreach. Moreover, managerial inefficiency is the main cause of the lower level of Performance in the selected region. Therefore, MFIs need to allocate resources efficiently and adopt the latest technology to further enhance social as well as financial Performance levels.

Lehenchuk et al. (2023) researched on the impact of financial Performance on the profitability of advertising agencies in the Slovak Republic. The objective of this study was to assess how financial Performance affects the profitability of advertising firms in Slovakia. Multiple regression was employed for data analysis. Results indicated that both firm size turnover and firm size positively impact profitability, whereas the debt to equity ratio exerts a negative influence. The study concluded that financing advertising firms through debt resources (such as loans or bonds) negatively affects return on assets (ROA), supporting the recommendation to seek alternative financing methods to enhance profitability. Additionally, the study found no significant relationship between current ratio (CR) and ROA, further supporting these conclusions.

Ilham, Akhyar and Maimunah (2023) examined the influence of profit management and financial Performance on company value in building materials construction sub-sector

companies. The study aimed to investigate how earnings management, profitability, capital structure, and liquidity impact firm value within the building materials sector. Multiple linear regression was employed for data analysis. Findings indicated that earnings management and liquidity did not notably influence firm value, whereas profitability and capital structure positively and significantly affected firm value. The research concluded that these factors significantly impact company value among building materials construction sub-sector firms listed in Indonesia.

Yasmin (2022) conducted a research on financial sustainability of microfinance institutions and macroeconomic factors: A case of South Asia. The study aimed to examine how macroeconomic decisions impact microfinance decisions in South Asia. It employed a fixed-effect regression model to analyze data, revealing that economic factors such as foreign investment, human development, inflation, interest rates, private credit, and labor force participation generally adversely affect financial sustainability, with the exception of GDP growth. Consequently, the study recommends that policy makers in South Asian countries take proactive measures to ensure the financial stability of microfinance institutions, specifically addressing poverty alleviation, women's empowerment, financial inclusion, and broader socio-economic development goals.

Agaba and Eton (2022) studied on credit risk management practices and loan Performance of microfinance institutions in Uganda. The study aimed to investigate how credit risk management practices relate to loan Performance. It employed multiple regression to analyze data and discovered significant connections: credit risk identification, assessment, monitoring, and control all impact loan Performance. The research concluded that effective implementation of these practices enhances credit risk management and subsequently improves loan Performance.

Mwangi (2022) researched on the effect of size on financial Performance of commercial banks in Kenya. The study aimed to determine how the size of commercial banks in Kenya affects their profitability. Regression analysis was employed to examine the relationship between size (measured by the logarithm of firm size) and financial Performance indicators (Return on Assets and Return on Equity). The results indicated a positive correlation between size and financial Performance among commercial banks in Kenya. Moreover, this effect was more pronounced among larger banks. Consequently, the study concluded

that size positively influences the financial Performance of commercial banks in Kenya. The null hypothesis, which stated that size has no significant effect on the financial Performance of commercial banks in Kenya, was rejected.

Bochaberi and Job (2021) researched on mobile banking and financial Performance of selected microfinance institutions in Kenya. The research investigated how mobile banking impacts the operational effectiveness of microfinance institutions. It employed descriptive statistics (such as means, Percentages, and standard deviation) and multiple regression for data analysis. Results indicated that mobile banking significantly affects the financial Performance of Kenya's four commercial banks. The study concluded that mobile banking is dependable for customers, enhances outreach to unbanked populations, ensures safety and affordability, improves efficiency, and boosts transaction volumes in commercial banks.

Kori, Muathe and Maina (2020) studied on financial and non-financial measures in evaluating Performance: The study aimed to assess how well commercial banks Performed by employing various financial and non-financial metrics. It utilized descriptive statistics and multiple linear regression for data analysis. The findings indicated that strategic intelligence significantly influences the Performance of commercial banks in Kenya. Furthermore, both financial and non-financial Performance indicators were deemed important for the banking sector and the overall economic development of Kenya.

Ndungu and Bosire (2020) researched entitled on determinants of financial Performance of commercial banks listed at NSE in Kenya. The study aimed to identify the factors influencing the financial Performance of commercial banks listed on the NSE in Kenya. Data analysis employed measures such as means and standard deviations. Results indicated that credit risk, liquidity risk, market risk, and operational risk collectively account for 31.42% of the variation in financial Performance among these banks. Specifically, the study concluded that credit risk positively influences financial Performance, whereas market risk and operational risk negatively affect it significantly.

Nalianya and Miroga (2020) examined on determinants of financial Performance of commercial banks in Kenya: Case of listed banks on the Nairobi Securities Exchange (NSE). The study aimed to assess the financial Performance of commercial banks in Kenya.

It utilized descriptive statistics, correlation coefficients, and multiple regression to analyze data. The findings indicated that liquidity, capital adequacy, operational expenses, and leverage all significantly impact the financial Performance of listed commercial banks in Kenya. Specifically, leverage was identified as having the most substantial positive influence on the financial Performance of these banks.

Ganyam and Iyungu (2019) researched on effect of accounting information system on financial Performance of firms: A review of literature. The research aimed to examine the theoretical underpinnings and empirical findings concerning accounting information systems and firm financial Performance. Using multiple linear regression, the study analyzed data and found that effective accounting information systems improve managerial decision-making, enhance internal controls, elevate financial reporting quality, refine Performance metrics, and streamline financial transactions. The study concludes that the most significant impact of information technology on accounting lies in enabling companies to develop and utilize computerized systems for tracking and recording financial transactions, thereby facilitating management decisions, bolstering internal controls, and ensuring the quality of financial reports.

Akanbi and Adewoye (2018) studied on effects of accounting information system adoption on the financial Performance of commercial bank in Nigeria. The research examined how commercial banks in Nigeria implement Accounting Information Systems (AIS) and assessed its impact on their financial Performance. It employed multiple regression analysis and tested Cronbach's alpha to analyze the data. The findings indicated that Nigerian commercial banks have embraced AIS for delivering services to customers, with a high level of utilization. The study concluded that AIS adoption significantly enhances various Performance indicators such as ROCE, ROTA, GPM, and NOP.

Yusuf and Surjaatmadja (2018) studied on analysis of financial Performance on profitability with non-Performance financing as variable moderation. The aim of this research is to investigate how the capital adequacy ratio (CAR) and financing to deposit ratio (FDR) impact profitability, measured by return on assets (ROA), with non-Performing financing (NPF) serving as a moderating variable. The study utilized multiple regression analysis to examine the data. The findings indicate that CAR and FDR individually exert a significant positive influence on profitability, whereas BOPO has a notable negative

impact. Moreover, the study suggests that NPF does not significantly alter the relationship between CAR and profitability nor between FDR and profitability. However, NPF does negatively influence the relationship between BOPO and profitability.

Robin, Salim and Bloch (2018) examined on financial Performance of commercial banks in the post-reform era: Further evidence from Bangladesh. The research intends to investigate how commercial banks in Bangladesh have performed financially. It employed multiple regression and the Hausman test to analyze data. Findings indicated that the financial reform did not notably impact return on assets (ROA) or return on equity (ROE) for the banks. However, there was an observed increase in net interest margin (NIM). The study concluded that, apart from the rise in NIM, the profitability of the banks sampled did not improve following the financial reform.

Narwal and Yadav (2016) researched on Sustainability of microfinance institutions: the role of outreach and financial sustainability. This paper aims to examine how selected outreach and financial indicators impact on the sustainability of Indian microfinance institutions. It adopts a quantitative approach based on the secondary data from conveniently sampled 40 microfinance institutions. A panel data technique is employed for model specification. It is shown that outreach and financial sustainability indicators affect to each other. Outreach indicators have a positive association with the profitability of microfinance institutions. Repayment levels of the loan have a positive impact on the outreach and negative impact on the financial sustainability. Microfinance institution may be focused on the repayment rate for attaining the level of sustainability. A clear balance may be in social objective and institution sustainability to ensure the sustainability of microfinance institutions is recommended. Studies on the trade-off between outreach and financial sustainability are limited especially in India. Its application added some precious characteristics in the microfinance sector.

International article so far reviewed are presented in Meta table 1.

Table 1

Analysis of International Articles

Date	Writer	Title	Methodology	Objectives	Findings
2024	Khan, Goswami and Choudhury	The microfinance institutions (MFIs) operate to achieve twin objectives: financial and social.	The study analysis is based on 2258 observations of MFIs operating during the years 2005 to 2018	to examine the dual goals (financial and social) of MFIs operating in South Asia	The results MFIs in the South Asian constituency are inclined towards financial goals rather than social outreach. Moreover, managerial inefficiency is the main cause of the lower level of Performance in the selected region.
2023	Lehenchuk, et. al	The impact of financial sustainability on the profitability of advertising agencies in the Slovak Republic	Multiple regression analysis	To analyze the impact of financial Performance on the profitability of advertising agencies in Slovakia	Research indicates that when Return on Assets is chosen as the dependent variable to assess financial Performance in advertising agencies, Firm size Turnover and Firm Size positively impact it significantly, whereas Debt to Equity Ratio exerts a negative influence
2023	Ilham, Akhyar and Maimun	The influence of profit management and	multiple linear regression	To examine the effect of earnings management, profitability,	Some findings suggested that manipulating earnings and liquidity did not notably influence firm

	unah, et. al	financial Performanc e on company value in building materials constructio n sub- sector companies		capital structure, and liquidity on the firm value in building materials	value. Conversely, profitability and capital structure were found to positively and significantly impact firm value.
2022	Yeasin	Impact of financial analysis on financial Performanc e	Multiple regression analysis	To analyze the impact of financial risk management on financial Performance	The financial Performance of commercial banks was adversely affected by Non-Performing Loans (NPLs) and Capital Adequacy Ratio (CAR), which had negative and statistically significant impacts. Conversely, the Loan to Deposit Ratio (LDR) had a positive and statistically significant impact on their financial Performance.
2022	Agaba and Eton	Financial literacy practices and Performanc e of commercia	Correlation and regression analysis	To examine the relationship between Credit Risk Management Practices and	The research discovered a notable correlation between identifying credit risk and loan Performance, assessing credit risk and loan Performance,

		l banks in Uganda		Loan Performance	monitoring credit risk and loan Performance, as well as controlling credit risk and loan Performance.
2021	Bocha beri and Job	Relationshi p between outreach and financial Performanc e of selected commerca l banks in Kenya	Descriptive statistics	To examine the role of mobile banking on Performance of commercial banks	Mobile banking impacts the financial Performance of four commercial banks in Kenya by providing reliability to customers, expanding access to the unbanked population, ensuring safety and affordability, enhancing efficiency, and boosting transaction volumes within these banks.
2020	Kori, Muath e, and Maina,	Financial and Non- Financial Measures in Evaluating Performanc e: The Role of Strategic Intelligenc e in the Context of Commercia l Banks in Kenya	Descriptive statistics and linear multiple regression analysis	To provides comprehensive discussion on role of strategic intelligence in commercial banks, in Kenyan context	Kenyan commercial banks should align their training focus and strategy implementation with the interests of investors using a balanced scorecard approach.

2020	Ndungu and Bosire	Determinants of financial Performance of commercial banks listed at nse in Kenya.	Descriptive statistics and multiple regression analysis	To establish the determinants of financial Performance of NSE listed commercial banks in Kenya	The study found a robust positive relationship ($r=0.926$) between the allocation of funds and the financial Performance of commercial banks. It suggested that 85.7% of the variation in financial Performance could be explained by the allocation of funds to different assets, while also recommending investigation into other factors such as inflation, exchange rates, and fluctuations in interest rates.
2020	Nalinya, and Mirogwa,	Determinants of financial Performance of commercial banks in Kenya: Case of listed banks on the Nairobi Securities	Descriptive analysis, correlation analysis and regression analysis	To examine the determinants affecting financial Performance of listed commercial banks in Kenya with specific objectives on the effect of liquidity, capital	The financial Performance of listed commercial banks in Kenya is significantly affected by various independent variables such as liquidity, capital adequacy, operational expenses, and leverage. Managers of these banks are advised to adopt a proactive credit policy to fully utilize debt in capital expenditures,

		Exchange (NSE)		adequacy, operational expense and leverage on Performance of banks in Kenya	thereby enhancing the firm's financial Performance.
2018	Mirie and Mwangi	The Effect of Size on Financial Performance of Commercial Banks in Kenya	Regression analysis	To establish the effect size has on the profitability of commercial banks in Kenya.	Policy initiatives aimed at expanding the scale of commercial banks should be taken into account, and shareholders or managers might also adopt growth strategies such as internal generation, fundraising, or mergers and acquisitions.
2018	Akanbi and Adewoye	Effects of Accounting Information System Adoption on the Financial Performance of Commercial Bank in Nigeria	Cronbach's alpha test	To examine various innovations to which their services are been Performance effectively with financial improvement.	Commercial banks in Nigeria have embraced and utilize AIS to deliver services to their customers, and its usage is widespread. The adoption of AIS shows a significant positive correlation with all Performance indicators (ROCE, ROTA, GPM, and NOP) at α levels.
2018	Yusuf and	Analysis of Financial	Multiple linear	To determine the effect of capital	Capital Adequacy Ratio (CAR) and Financial Depth Ratio (FDR)

	<p>Surjaatmadja Profitability with Non Performance Financing as Variable Moderation (Study at Sharia Commercial Bank in Indonesia Period 2012–2016)</p>	<p>regression analysis</p>	<p>adequacy ratio (CAR) and financing deposit ratio (FDR) on profitability (proxies with return on assets [ROA]) with non Performing financing (NPF) as a moderation variable</p>	<p>positively influence profitability, Bank Operating Ratio (BOPO) negatively affects it. Non-Performing Loans (NPF) do not significantly influence the relationship between CAR and profitability or between FDR and profitability, but they do negatively impact the relationship between BOPO and profitability.</p>
<p>2018</p>	<p>Robin, Salim and Bloch Financial Performance of commercial banks in the post-reform era: Further evidence from Bangladesh</p>	<p>Regression analysis</p>	<p>To Examine the financial Performance of commercial banks in Bangladesh in terms of profitability measures and improved asset quality, which are and after a financial liberalization</p>	<p>Financial reforms have not notably impacted banks' return on assets (ROA) or return on equity (ROE), whereas the increase in net interest margin (NIM) has strengthened capital and improved asset quality, which are primary factors influencing profitability. Hence, an effective banking policy focused on enhancing capital reserves and asset quality is crucial to</p>

ensuring a sustainable banking sector in Bangladesh.

2016	Narwal and Yadav	Sustainability of microfinance institutions : the role of outreach and financial sustainability	Descriptive correlation and regression analysis	To examine how selected outreach and financial indicators impact on the sustainability of Indian microfinance institutions.	Outreach indicators have a positive association with the profitability of microfinance institutions. Repayment levels of the loan have a positive impact on the outreach and negative impact on the financial sustainability
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2.2.1 Review of national articles

Shrestha (2023) conducted a research on Impact of firm-specific factors on the financial Performance of Nepalese microfinance institutions. This research aimed to assess how specific factors related to firms affect the financial Performance of microfinance institutions (MFIs) in Nepal. Using multiple regression analysis, the study discovered that these factors significantly influence the financial Performance of Nepalese MFIs. Specifically, it found that a higher deposit ratio, improved management efficiency, and a wider interest rate spread have a positive impact, while poorer asset quality negatively affects financial Performance. The study concludes that enhancing deposit ratios, management efficiency, and interest rate spreads could enhance the financial Performance of Nepalese MFIs.

Dhungana and Ranabhat (2022) analyzed on impact of microcredit on micro-enterprise development: A case of Gandaki province of Nepal. The study aims to investigate how microcredit affects the development of micro-enterprises in Nepal's Gandaki Province. It employed multiple regression analysis and correlation coefficients as its analytical tools. Results indicated that microcredit has boosted investment, revenue, and profits for micro-businesses, facilitating their expansion and job creation. The study emphasizes that effective use of microcredit is crucial for the long-term success and sustainability of these enterprises.

Kunwar (2022) conducted a research on financial sustainability of microfinance institutions in Nepal. The main focus of microfinance sustainability is unquestionably the financial stability of microfinance institutions. The research employed descriptive statistics, correlation analysis, and regression analysis to analyze the data. It revealed that financial sustainability refers to the ability to pursue microfinance objectives without continual donor funding. The study concluded that self-sufficiency is central to these definitions, indicating that microfinance operations can potentially be profitable.

Jha and Hui (2022) examined on a comparison of financial Performance of microfinance institutions: a case study of Nepal. The aim of this research was to examine how the financial Performance of various ownership models of microfinance institutions in Nepal compared. The study employed multivariate regression analysis for its data analysis. Findings indicate that public sector banks exhibit significantly lower efficiency compared to their counterparts, whereas domestic private banks perform equally well as foreign-owned (joint-venture) banks. The study concludes that return on assets was notably affected by factors such as capital adequacy ratio, interest expenses relative to total loans, and net interest margin. Additionally, capital adequacy ratio was found to have a substantial impact on return on equity.

Shrestha (2020) examined on changing dimension of financial inclusion in Nepal: A comparative analysis. The research aimed to examine shifts in financial inclusion across Nepal over time and to contrast these trends with other South Asian nations using secondary data. Descriptive statistics and regression analysis were employed to analyze the data, revealing insufficient and unequal access, particularly in credit usage, highlighting the considerable effort needed to enhance inclusivity within the financial system. The study

suggests that leveraging modern technology and implementing inclusive policies are crucial steps toward improving comprehensive access to finance. It concluded that raising awareness and enhancing the benefits associated with formal financial services are essential for promoting meaningful financial inclusion.

Oli (2018) researched on impact of microfinance institutions on economic growth of Nepal. This research investigated how microfinance institutions influence Nepal's economic growth. Using multiple regression analysis, the study found that an increase in both firm size and total loans correlates with economic growth. Similarly, higher total deposits were associated with increased economic growth. Furthermore, the study concluded that a greater money supply generally leads to higher economic growth, while also highlighting a negative correlation between inflation and economic growth in Nepal. This suggests that higher inflation tends to result in lower economic growth.

Simkhada (2017) conducted a research on indicator for measuring Performance of financial cooperatives in Nepal. The aim of this paper is to propose various metrics for evaluating the Performance of financial cooperatives in Nepal. The study employed PEARLS and CAMEL analyses to scrutinize the data. Results indicated that assessing the Performance of financial cooperatives requires 32 financial ratios across eight Performance dimensions and 25 self-governance indicators. The research concluded that profitability, growth, market share, governance, sustainability, efficiency, productivity, and liquidity are crucial dimensions of organizational Performance. These dimensions were substantiated through interviews and pilot testing, with the exception of market value of the equity.

2.3 Research Gap

Research gap is the different between previous work done and the present research work. There has been lot of research work performed and studies conducted in the topic impact of credit risk on profitability of commercial banks. This study wishes to bridge the gap and address the importance of credit risk to survive in stiff competition and to achieve desired return. This research study will analyze the ten years data obtained from the secondary sources and has selected sample size of four microfinance companies as compared to Munangi and Sibindi (2020) that had selected only two commercial banks with ten year data.

This study uses a variety of ratios, trend analysis, and statistical tools to investigate the financial performance of a chosen sample of microfinance firms. Analysis of survey data using financial instruments. To ensure that the data was genuine and up to date, the researcher examined data from five fiscal years. This study tackles problems in Nepalese microfinance that were not covered in earlier research. The goal of the study is to define financial terms. Understanding has been deepened by reviewing pertinent literature, which is crucial for the significance and goal of the study. Lending procedures, credit policies, financial performance, credit administration, and liquidity mobilization in microfinance are all covered in earlier studies. To carry out these evaluations, researchers have used a variety of ratio analyses. Prior research on financial performance focused on narrow ratios that were insufficient to adequately address the problems. This study methodically analyzes and classifies different ratios. Previous studies failed to examine the effects of money mobilization and investment characteristics on profitability. There was no classification of the ratios according to their attributes. This study, on the other hand, groups all ratios based on their unique domains and attributes.

Prior studies limited their analysis to a five-year fiscal period by using data from only one year. These limitations draw attention to a knowledge gap on the current state of affairs in Nepalese microfinance, even though the data is still accurate and up to date. In order to overcome these constraints, a thorough definition of financial performance is provided in this paper. It makes use of a variety of financial instruments, including credit risk evaluations, activity ratios, profitability indicators, liquidity ratios, asset management metrics, and other pertinent ratios. To give a comprehensive examination, statistical techniques such as trend analyses and correlation coefficients will be used. It is anticipated that this study will make a substantial contribution to our knowledge of financial performance in financial institutions.

CHAPTER - III

RESEARCH METHODOLOGY

Research methodology refers to the various sequential steps (along with a rationale of each step) to be adopted by a researcher in studying a problem with certain objectives in view. Thus the overall approach to the research is presented in this chapter. This chapter consists of research design, sample size and selection process, data collection procedure and data processing techniques and tools.

3.1 Research Design

Research design is the specification of method and procedures for acquiring the information needed. It deals with what information is to be collected from which sources and by what procedures. To achieve the specific objective of the study, descriptive and causal research design have been used.

3.2 Population and Sample

All 55 microfinance organizations listed on the Nepal Rastra Bank website (www.nrb.org.np) that were active in the country as of May 2024 are included in the study. Using purposive sampling, the following were chosen: Gurans Laghubitta Bittiya Sanstha Limited (GLBSL), Sana Kisan Bikas Laghubitta Bittiya Sanstha Limited, First Microfinance Laghubitta Bittiya Sanstha Limited, and RSDC Laghubitta Bittiya Sanstha Limited. The study spans ten fiscal years, from 2070–2071 to 2079–2080.

3.3 Nature and Sources of Data

For the research project, adequate data must be acquired from a variety of sources. To accomplish the goals of the study, the researcher's main duty is to collect data and information from various sources. Depending on where it comes from, data might be classified as primary or secondary. The primary source of data used in this study is secondary data that was gathered from various publishers' pertinent publications. Selected microfinance organizations' financial data for the last ten years was obtained from www.nepalstock.com. Books, periodicals, newspapers, business reports, and magazines

will also be consulted when necessary. Since the study is focused on fast-moving phenomena, all computations will only employ secondary data.

3.4 Data Procedures

The original form of data collected from several sources cannot be used directly for analysis. To make it appropriate for analysis, it has been checked, reassessed, modified, and arranged into tables. The data's dependability was guaranteed by the researcher by obtaining it from legitimate sources. One of the most important parts of the course is data collecting, and there are several tools available for this. These tools need to be planned for and given significant thought. When the researcher has a solid grasp of the issue, they can be applied most successfully. Data collection methods, however, are contingent upon a number of variables, including the nature of the information required, the type of respondents, the length of the study, and the workforce's availability. Information was gathered from microfinance sources, such as annual reports, newspapers, and bulletins, in order to meet the study's objectives. In addition, information from NRB websites, magazines, dissertations, unpublished periodicals, and publications from the NRB were used. Secondary data sources provided the majority of the study's data.

3.5 Method of Data Analysis

The performance of First Microfinance Laghubitta Bittiya Sanstha Limited, Sana Kisan Bikas Laghubitta Bittiya Sanstha Limited, Gurans Laghubitta Bittiya Sanstha Limited (GLBSL), and RSDC Laghubitta Bittiya Sanstha Limited is evaluated and analyzed using a variety of financial and statistical tools and techniques. The following statistical and financial tools were employed in this study:

3.5.1 Statistical Tools

The statistical tool is essential to measure the relationship of two or more variable. It is the mathematical technique used to facilitate the analysis and interpretation of the performances of the organizations. It also helps to present the data, show the relation and deviations or differences of variables of organizations. In this study, the following statistical tools are used:

Descriptive Statistics

Descriptive statistics are brief informational coefficients that summarize a given data set, which can be either a representation of the entire population or a sample of a population. Descriptive statistics are broken down into measures of central tendency and measures of variability (spread). Measures of central tendency include the mean, median and mode, while measures of variability include standard deviation, variance, minimum and maximum.

Arithmetic Mean

The arithmetic mean or simple mean of set of observations is the sum of all the observations divided by the number of observations. It is the best value, which represents the whole group means is the arithmetic average of a variable. Arithmetic mean of a series is given by:

$$\text{Mean } (\bar{X}) = \frac{\sum x}{n}$$

Where,

\bar{X} = Sum of the variables 'x'

N = No. of Observation

Standard Deviation

The standard deviation is the absolute measure of dispersion in which the drawback present in other measure of dispersion as it satisfied most of the requisites of a good measure of dispersion. Standard deviation is defined as the positive square root of the mean square of the deviation taken from the arithmetic mean. It indicates the range and size of deviance from the middle or mean. It measures the absolute dispersion. Higher the standard deviation higher will be the variability and vice versa. Dispersion measures the variation of the data from the central value. In other words, it helps to analyze the quality of data regarding its variability. It is calculated as:

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

Coefficient of Variation (CV)

Standard deviation is the absolute measure of dispersion. The relative measure of dispersing based on the standard deviation is known as the measurement of coefficient of standard

deviation. The percentage of measure of co-efficient of so is called co- efficient of variation. Less CV is the more uniformity and consistency and vice versa. Only standard deviation is not appropriate to compare two pairs of variables but also CV is capable to compare two variables independently in terms of their variability. It is calculated as under:

$$\text{Coefficient of Variation (C.V.)} = \frac{\text{SD}}{\text{Mean}} \times 100$$

Correlation Coefficient (r)

Correlation coefficient is defined as the association between the independent Variable and dependent variable. It is a method of determining the relationship between these two variables. If the two variables are so related change in the value of independent variable cause the change in the value of dependent variable then it is said to have correlation coefficient.

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

The Karl Pearson coefficient of Correlation always falls between- 1 to +1. The Value of correlation of coefficient in -1 signifies the negative correlation and in +1 signifies the positive correlation coefficient.

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

$r < 0$, there is negative relationship between the variables

$r > 0$, there is positive relationship between the variables

$r = -1$, the relationship is perfectly negative between the variables

$r = +1$, the relationship is perfectly positive between the variables

Coefficient of determination (r^2)

When two variables are independent and dependent on each other, the strength of their linear relationship is measured by the coefficient of determination. In essence, it shows the percentage of the dependent variable's overall fluctuation that the independent variable can account for. The values of this coefficient span from 0 to 1. When the value of the scatter plot is one, all of the data points fall exactly on the regression line, indicating that there is no unexplained variation.

Regression analysis

The direction of movement is provided by regression analysis, but the relative movement of the variables under investigation is not indicated. It does, however, aid in our comprehension of the relative movement of the variables. The following variable's regression analysis has been computed and analyzed. Multiple regression analysis can be used to quantify and estimate the elements influencing estimations of the ROA and ROE.

The equation for multiple regression is:

$$\text{Model 1: ROA} = a + b_1\text{DR} + b_2\text{FS} + b_3\text{CRR} + b_4\text{CAR}$$

$$\text{Model 2: ROE} = a + b_1\text{DR} + b_2\text{FS} + b_3\text{CRR} + b_4\text{CAR}$$

3.6 Research Framework

Independent Variables

Debt Ratio
(DR)

Firm Size (FS)

Cash Reserve Ratio
(CRR Ratio)

Capital Adequacy
Ratio (CAR)

Dependent Variables

Return on Assets (ROA)
Return on Equity (ROE)

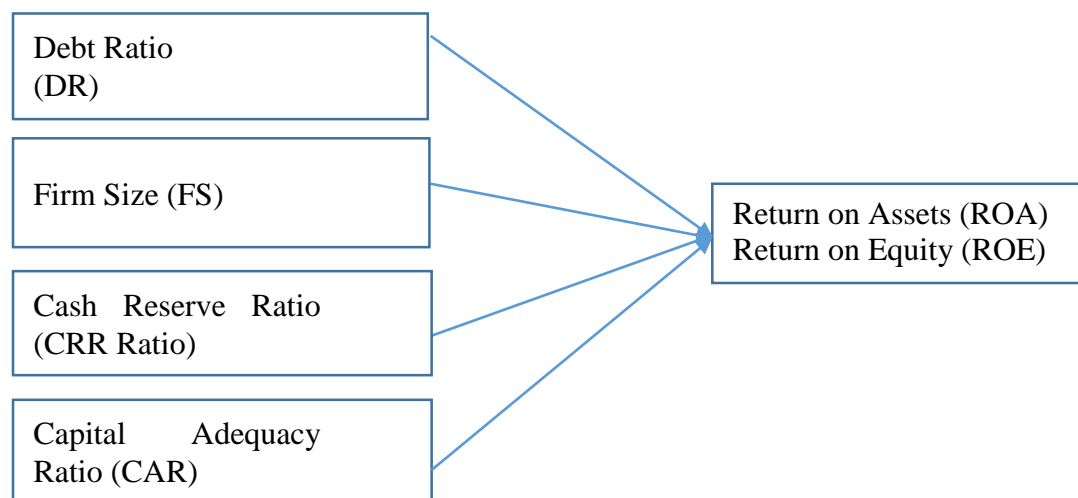


Figure 1

Research Framework

Source: (Narwal & Yadav, 2016)

3.6.1 Definition of Variables

Debt Ratio

The debt-to-equity ratio displays the proportion of a company's equity held by shareholders as opposed to the amount owned by creditors, or those from whom it has borrowed money. Together with the debt servicing ratio and the debt-to-firm size ratio, it is one of three metrics used to determine debt capacity (Bahadur & Bhandari, 2021).

Firm Size (FS)

All of a small business's valuable assets are considered its firm size. Cash, inventory, equipment, tools, and other financial obligations owed to you are all included in the size of the business. Add your equity and liabilities to get the size of your company. The easiest way to calculate business size using this technique is to deduct the value of liabilities from the value of equity or assets because liabilities have a negative value. Your firm's size is represented by the resultant value (Connell, 2023).

Cash Reserve Ratio (CRR)

The central bank of Nepal, known as Nepal Rastra Bank (NRB), oversees all commercial banks. The NRB has mandated that commercial banks retain a specific percentage of their total deposits as reserves in order to facilitate the smooth operation of these banks. This is specifically done to keep commercial banks strong in terms of their liquidity position (Hamal, 2020).

Capital Adequacy Ratio

The amount of capital that a bank has on hand is expressed as a percentage of its risk-weighted credit exposures and is known as the capital adequacy ratio, or CAR. The ratio of a bank's capital to its risk-weighted assets and current liabilities is known as the capital adequacy ratio, or CAR. Central banks and bank regulators make the decisions to keep commercial banks from taking on too much leverage and going bankrupt in the process (Akanbi & Adewoye, 2018).

Return on Assets

Given that it shows the returns produced by the assets a bank has, this ratio is most likely the most crucial when comparing the effectiveness and operational performance of banks (Getahun, 2015).

Return on Equity

The financial performance metric known as return on equity (ROE) is computed by dividing net income by shareholders' equity. ROE is referred to as the return on net assets because shareholders' equity is calculated by deducting debt from assets (Macharia, 2016).

CHAPTER – IV

RESULTS AND DISCUSSIONS

The statistics are carefully presented and examined in this chapter. These particular details could only be found in annual reports. The collected data is examined, assessed, and interpreted in this chapter in accordance with the study approach described in the third chapter. It makes comparisons and provides relevant information and insights on the dividend policies of microfinance firms.

4.1 Descriptive Statistics of Variables

The statistical summaries for the study's variables are shown in Table 2. The findings indicate that, in addition to other independent variables like debt ratio, firm size, CD ratio, cash reserve ratio, and capital adequacy ratio, microfinance institutions in Nepal exhibit diverse degrees of performance across profitability indicators like ROE and ROA.

Table 2

Descriptive Statistics of Variable of Microfinance companies

Variables	N	Minimum	Maximum	Mean	Std. Dev.	C.V
Dependent Variables						
Return on Assets	40	0.02	4.3	1.549	1.00358	0.65
Return on Equity	40	0	29.02	12.4671	8.31278	0.67
Independent Variables						
Debt Ratio	40	0	1.58	0.6208	0.37792	0.61
Firm Size	40	5.76	10.33	8.6147	1.0873	0.13
Cash Reserve	40	0	0.79	0.4044	0.26323	0.65
Capital Adequacy	40	0	198.38	38.8251	34.6203	0.89

Source Appendix II & Annual Report of Sample Companies

The descriptions of the independent and dependent variables are shown in Table 2. The six variables are as follows: firm size, CRR, CAR, DR, ROA, and ROE. Three essential statistical measures are included for each variable: the mean, which indicates the average value, the maximum, which shows the greatest recorded value among the microfinance organizations under investigation, and the minimum, which displays the lowest observed

value. Furthermore, "Std. Dev." provides numbers for each variable and measures the data's dispersion around the mean. Each variable's coefficient of variation (CV), which displays the standard deviation to mean ratio, draws attention to how consistently and uniformly distribute each variable is. As an illustration, the CV values of ROA and ROE are 0.65 and 0.67, respectively, indicating a comparable degree of consistency in their readings.

4.2 Correlation Analysis

The correlation coefficients between variables are shown tabularly in a correlation matrix. If there is no linear relationship between the variables, the correlation coefficient is 0. Perfect positive correlation is represented by a value of +1, and perfect negative correlation is represented by a coefficient of -1. The correlation matrix is displayed in Table 3.

Table 3

Correlation Coefficients of Study Variables

Variables	DR	FS	CRR	CAR	ROA	ROE
Debt Ratio (DR)	1					
Firm size (FS)	-0.234 0.169	1				
Cash Reserve Ratio (CRR)	0.082 0.634	-0.004 0.983	1			
Capital adequacy Ratio (CAR)	.384* 0.023	-0.145 0.407	.350* 0.039	1		
Return on Assets (ROA)	-0.112 0.515	0.131 0.447	.802** 0	0.225 0.193	1	
Return on Equity (ROE)	-0.305 0.071	.641** 0	-0.11 0.522	-0.167 0.339	-0.045 0.795	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Source SPSS Output

Using a correlation coefficient matrix for both dependent and independent variables, Table 3 displays the results of the correlation test. There is a weak negative link between the debt ratio (DR) and both ROA (-0.112) and ROE (-0.305). DR shows a non-significant negative

association (-0.234) with firm size (FS) but a significant positive connection (0.384) with CAR at the 0.05 significance level.

Likewise, there is a positive correlation between company size and ROE (0.641) and between firm size and ROA (0.131). Furthermore, there is a substantial correlation (0.641) between company size and ROE at the 1% significance level. With a coefficient of 0.641, the association between company size and ROE is noticeably favorable at the 0.01 significance level. Furthermore, with a value of 0.802, CRR shows a substantial positive connection with ROA at the 0.05 significance level. On the other hand, at the appropriate significance levels, CAR has a high negative connection with ROE (-0.167) and a minor degree of positive correlation with ROA (0.225).

4.3 Regression Analysis

As independent variables, the study examines the link between many financial indicators (ROA, ROE, firm size, debt ratio, and capital adequacy ratio). It makes use of information from four microfinance firms that are listed on the NEPSE to examine the regression outcomes of ROA. 55 NRB-regulated microfinance companies make up the sample, which was studied between fiscal years 2070–2071 and 2079–2080.

The dependent variable in this analysis is ROA, while the independent variables are company size, DR (debt ratio), CAR (capital adequacy ratio), and CRR (cash reserve ratio). The results' statistical significance is denoted by the t-values and the risk indicators, which are included in parenthesis. Furthermore, the Adjusted R square and F-statistic (abbreviated as F and Adj. R², respectively) offer more information on the explanatory capacity of the model.

Regression Analysis of firm size, Debt ratio, CAR and CRR on ROA

Table 4

Model Summary of ROA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.817a	.667	.624	.61537

a. Predictors: (Constant), firm size, FS, DR, CAR and CRR

b. Dependent Variable: ROA

The ROA models are summarized in Table 4, where R² denotes the degree to which independent factors can be responsible for the variability in profitability, specifically ROA. It shows that the independent variables TA, DR, CAR, and CRR account for 66.70% of the variation in ROA. Adjusted R², which takes sample size into consideration, is seen as a more trustworthy statistic. The independent variables' coefficients show how much of an impact they have on the dependent variable. Dispersion is quantified by the standard error, which is the average deviation of the coefficients from the regression line.

Table 5

ANOVA Table

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	23.512	4	5.878	15.522	.000b
	Residual	11.739	34	.379		
	Total	35.251	39			

a. Dependent Variable: ROA

b. Predictors: (Constant), FS, DR, CAR and CRR

As seen in the ANOVA table, Table 5 provides a thorough summary and analysis of the independent and dependent variables. At a significance level of 0.05, the data show a statistically significant link ($P\text{-value} = 0.000 < 0.05$) between the dependent variable (ROA) and the independent variables (TA, DR, CAR, and CRR). This indicates that there is a statistically significant association between these variables, supporting the requirement that the computed p-value be less than 5% in order to demonstrate significance.

Table 6*Regression Coefficients*

Model	Unstandardized		Standardized		Sig.	Remarks
	Coefficients		Coefficients			
	B	Std. Error	Beta	t		
1(Constant)	-.615	.915		-.672	.007	Significant
Debt Ratio	.014	.313	.005	.046	.046	Significant
Firm Size	.113	.098	.122	1.149	.025	Significant
Cash Reserve	3.169	.421	.831	7.522	.000	Significant
Capital Adequacy	-.003	.003	-.086	-.726	.073	Insignificant

a. Dependent Variable: ROA

Regression analysis output: coefficient

The linear equation of this model is,

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$$

$$ROA = -0.615 + 0.014 DR + 0.113 FS + 3.169 CRR - 0.003 CAR$$

The regression coefficients are shown in Table 6, where the constant's p-value is greater than 0.05, indicating that its value is not significant. On the other hand, CRR has a strong effect on ROA, as demonstrated by its p-value of 0.000. According to the related beta value of 3.169, there is an average rise in ROA of 3.169 units for every unit increase in CRR.

Nevertheless, p-values above 0.05 for DR, FS, and CAR indicate that their effects on ROA are not statistically significant.

Regression Analysis of firm size, Debt ratio, CAR and CRR on ROE

From a total licensed population of 55 microfinance enterprises controlled by the NRB, this table offers regression findings of Return on Equity (ROE) utilizing five explanatory variables across a sample of four microfinance companies listed on the NEPSE. The data includes observations from 2070–2071 and 2079–2080 fiscal years. The dependent variable is ROE, and the independent variables are Cash Reserve Ratio (CRR), Debt Ratio (DR), Firm size (FS), and Capital Adequacy Ratio (CAR). T-values are represented by parenthetical figures, and asterisks are used to emphasize importance. The terms F and Adj. R2 stand for the Adjusted R-squared and F-statistic, respectively.

Table 7*Model Summary of ROE*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.667a	.445	.373	6.58230

a. Predictors: (Constant), FS, DR, CAR and CRR

b. Dependent Variable: ROE

The ROE model summary is shown in Table 7, where R^2 is the percentage of profitability variability that ROE can account for. Adjusted R^2 , which takes sample size into consideration, is seen as a more trustworthy metric. The influence of independent variables on dependent variables is shown by the coefficient sizes, where the sign denotes the direction of influence (positive or negative). The average divergence of the coefficients from the regression line, or standard error, indicates dispersion.

Table 8*ANOVA Table*

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1075.454	4	268.863	6.205	.001b
	Residual	1343.129	34	43.327		
	Total	2418.582	39			

a. Dependent Variable: ROE

b. Predictors: (Constant), FS, DR, CAR and CRR

The ANOVA table provides a thorough summary of the significance of the independent and dependent variables, which is shown in Table 8. It shows that the link between the dependent variable, ROE, and the independent variables, FS, DR, CAR, and CRR, is statistically significant at significance levels of 0.05 or 0.001. In order to determine significance, the calculated p-value needs to be less than the 5% cutoff.

Table 9*Regression Coefficients*

Model	Unstandardized		Standardized		Sig.	Remarks
	B	Std. Error	Beta	t		
1(Constant)	-24.377	9.786		-2.491	.018	Significant
Debt Ratio	-3.630	3.350	-.159	-1.083	.287	Insignificant
Firm Size	4.670	1.049	.611	4.453	.000	Significant
Cash Reserve	-2.929	4.507	-.093	-.650	.521	Insignificant
Capital Adequacy	.003	.037	.014	.090	.929	Insignificant

a. Dependent Variable: ROE

Regression analysis output: coefficient

The linear equation of this model is,

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$$

$$ROE = -24.377 - 3.630 DR + 4.670 FS - 2.929 CRR + 0.003 CAR$$

Table 9 demonstrates that the constant's p-value is less than 0.05, indicating a significant constant value. Firm size (FS), with a p-value of 0.000, less than 0.05, strongly influences ROE. The ROE grows by an average of 4.670 units for every unit increase in firm size, according to the beta coefficient of 4.670. Furthermore, DR, CRR, and CAR have p-values above 0.05, suggesting that they have little effect on ROE.

4.4 Discussions

In order to better understand the relationships between the several financial measures (FS, DR, CAR, CRR, ROA, and ROE), the study looked at both positive and negative correlations. In particular, a positive correlation between FS, DR, and CRR is observed, indicating that these businesses manage their financial health well. The capacity of profitability indicators to interact favorably is essential for effective profit management. Subsequent investigation, however, shows that overall, ROA and ROE are not significantly impacted by company size, CRR, CAR, or DR.

Firm size, PE ratio, and CRR significantly increase profitability. Nonetheless, firm size has a minimal negative impact on ROE, which runs counter to the findings of Muliani et al. (2023). Firm size alone does not determine ROA; instead, CRR and firm size have a

beneficial impact on ROA, in line with research by Tiwari (2022). DR and CAR demonstrate unfavorable and negligible effects. These results show that the debt ratio, capital adequacy ratio, and CRR have a somewhat favorable impact on profitability; they are in line with the findings of Dhungana and Ranabhat (2022) but not with those of Kori, Muathe, and Maina (2020).

The findings of Serhii's (2023) study, which closely aligns with our analysis, show variances in profitability factors. How well companies use their earnings to generate profits is reflected in the average profitability during the research period. In line with the findings of Agaba and Eton (2022), correlation tests reveal a substantial positive link between the debt ratio (DR) and CAR at the 0.05 and 0.01 levels of significance. On the other hand, connections with return on equity (ROE) and return on assets (ROA) are shown to be insignificant, and there is a negative significant link with firm size (FS). These findings conflict with those of Robin, Salim, and Bloch (2018) and Yeasin (2022), although they are in line with Akanbi and Adewoye (2018) and Bochaberi and Job (2021). Moreover, there is a significant positive correlation between return on equity (ROE) and firm size (ROE). Furthermore, there is a little negative link between debt ratio (DR) and payout efficiency ratio (CAR) and a slight positive association between DR and return on assets (ROA) as well as ROE. Similarly, there is a strong positive link between CRR and CAR and ROA, but a non-significant negative correlation with ROE. On the other hand, CAR exhibits a high positive link with DR but a weak correlation with ROA and ROE. Firm size (FS), when examined in conjunction with ROE, also exhibits statistical significance at the 0.01 level, which is in line with Mwangi's (2018) findings.

The negative coefficient of DR leads to a corresponding decrease in ROA by the same amount that DR increases by one rupee. This suggests that as DR rises, the return on assets (ROA) for Nepalese microfinance companies decreases. Unlike the positive coefficients of FS, CRR, and CAR, which indicate that higher values of these variables would enhance profitability for microfinance firms, the beta coefficient of DR is negative. This indicates that higher DR values are associated with reduced ROA. The significance of DR as an independent variable is inversely related, even at the 0.10 significance level. In contrast to the findings of Yeasin (2022) and Bochaberi and Job (2021), which suggest FS, CRR, and CAR are insignificantly positive, supporting the conclusions of Akanbi and Adewoye (2018).

A one rupee increase in DR and CAR results in a corresponding fall in ROE, according to the negative coefficients for both variables. This implies that decreased DR and CAR may lead to poorer ROE for Nepali microfinance companies. Given that DR and CAR both have negative beta coefficients, it is possible that higher concentrations of both variables will increase microfinance firms' profitability. With a p-value of 0.000 at a significance threshold of 0.05, firm size stands out as a statistically significant independent variable. DR, CRR, and CAR are not statistically significant, in contrast to the conclusions of Dhungana and Ranabhat (2022), Kunwar (2022), Agaba and Eton (2022), and Robin, Salim, and Bloch (2018).

CHAPTER – V

SUMMARY AND CONCLUSION

Examining how outreach by GLBSL, SKBL, FIRST, and RSDC contributes to financial stability and how it affects microfinance institutions' performance is the goal of this study. These analyses are compiled in this chapter together with an overview, results, and implications. The study's results and conclusions are outlined in the first section, while the study's design implications are covered in the second.

5.1 Summary

This study aims to investigate the financial parameters of microfinance organizations, such as return on equity, return on assets, company size, cash reserve ratio, debt ratio, and capital adequacy ratio. The purpose of the study is to evaluate the effects of these ratios on microfinance enterprises' returns on assets and equity. To do this, it uses a combination of causal comparison and descriptive comparison techniques. While explanatory and causal research designs are used to quantify the effects of debt ratio, capital adequacy ratio, firm size, and cash reserve ratio on the financial Performance, i.e. ROA and ROE of microfinance firms in Nepal, descriptive research is utilized to understand current dividend practices. For this study, secondary data from yearly reports covering the ten-year period from 2070/71 to 2079/80 are used.

The study focuses on the relationship between financial metrics and the profitability of Nepali microfinance companies. It is said that these companies are extremely profitable. Obtaining investments and disbursing dividends from shares are their primary duties. The study's data comes from the annual reports of a few chosen companies covering the years 2070–2071–2079–2080. To investigate the dynamic links between various financial indicators, a variety of statistical models are used, including regression analysis, average, standard deviation, coefficient of variation, and Pearson correlation. The demographic information used in this study is derived from all 55 microfinance companies that are currently listed and active within Nepal. First Microfinance Laghubitta Bittiya Sanstha Limited, Gurans Laghubitta Bittiya Sanstha Limited (GLBSL), Sana Kisan Bikas Laghubitta Bittiya Sanstha Limited, and RSDC Laghubitta Bittiya Sanstha Limited make up the sample. In the current environment, these four microfinance institutions are

renowned for their exceptional performance in handling deposits and making loans. The study assesses the long-term effects of ratios like DR, CAR, TS, and CRR on the profitability of the microfinance industry.

5.2 Conclusion

Firm size greatly increases ROE, which is in line with Zelalem findings (2022). In contrast, DR's ROE exhibits favorable outcomes but falls short of statistical significance, which is in line with Abebe (2022) findings. Prior research conducted by the industry suggests that this area has not seen much advancement. Some financial institutions may experience liquidity or bankruptcy challenges as a result of poor loan portfolio management and other problems that make it difficult for them to fulfill their responsibilities to shareholders and clients.

As per Shah (2019) research, the reserve ratio and earnings ratio have a direct impact on the profitability of financial institutions by augmenting the liquidity of financial organizations, fostering credit expansion, and stimulating general economic growth. The p-value of 0.000 indicates that firm size is statistically significant as an independent variable when paired with ROE. Because of their larger p-values, DR, CRR, and CAR do not reach statistical significance at the 0.05 level.

As a percentage of all loans, the financial stability ratio is still high and is likely to continue rising. Similarly, the companies made a noticeably large provision for financial stability during the research period, suggesting that unrecoverable loans may have an adverse effect on bank profitability in the future.

5.3 Implications

Following are some of the implications based on the above analysis:

- Financial companies that function in the private sector have to put profit first. They should proceed cautiously when seeking profits in an honest manner in order to preserve the confidence of clients, depositors, and shareholders. Right now, RSDC and SKBL are more profitable than GLBSL and FIRST. Thus, it is highly advised that in order to increase profit margins, GLBSL and FIRST use shareholder cash and risky assets. In a same vein, they ought to cut costs and look for economical

ways to raise more money. For businesses to effectively attract and keep clients, they must fortify and actively utilize their marketing initiatives.

- Lower capital adequacy ratios have a negative influence on the bottom lines of financial corporations, which results in decreased profitability. It is anticipated that this decline in earnings CAR share (EPS) will free up more money for investments in the productive sector. As such, it is expected that the dividend CAR share (DPS) of the RSDC will increase in the future, necessitating cautious monitoring of this trend. Establishing a written strategic dividend strategy is advised for all organizations. This policy should be authorized by the Supervisory Board or the General Meeting and made public as necessary for publicly traded companies.
- There is notable variation in the DR, CAR, and ROE of the chosen financial institution. Controlling variations and guaranteeing regularity in these measurements is essential. Stakeholders in all institution will be satisfied if a key financial indicator indicates a positive market sentiment; on the other hand, negative signs may have detrimental long-term effects on both.
- When compared to other sample companies, RSDC has a lower debt ratio. Thus, in terms of performance and dividend sustainability, RSDC is outperforming FIRST, GLBSL, and SKBL, indicating that SKBL, FIRST, and GLBSL have low credit risk.

Therefore, it is advised that other businesses that are comparable take extra care and objectivity while making loans and advances. To ensure that the money is being used appropriately, ongoing oversight and follow-up are necessary once loans are issued.

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APPENDICES

Appendix I

Essential Information from Respective Microfinance Annual Report

Name	DR	FS (Ln)	CRR	CAR	ROA	ROE
Gurans	0	0	0	0	0	0
	0	0	0	0	0	0
	0.63	6.64	0.79	0	1.17	0.02
	0.92	6.83	0.76	18.38	1.85	0.02
	1.01	7.47	0.71	13.31	2.13	0.03
	1.58	7.87	0.51	13.97	2.43	0.03
	1.07	8.15	0.54	15.52	2.29	0.03
	0.85	8.29	0.59	19.66	2.29	0.1
	0.84	8.64	0.56	22.3	1.86	0.11
0.88	9.10	0.64	20.11	2.04	0.32	
First	0.61	7.36	0.61	31.57	1.65	22.03
	1.01	7.76	0.49	11.27	1.54	14.17
	0.77	8.03	0.48	17.04	1.77	17.65
	0.78	8.24	0.59	20.32	2.12	15.53
	0.85	8.47	0.56	18.81	2.13	12.92
	0.91	8.72	0.59	19.37	2.17	14.52
	0.78	8.75	0.55	11.81	2.21	13.79
	0.57	9.19	0.51	15.41	1.76	15.71
	0.71	9.3	0.54	17.88	2.4	19.13
0.74	9.61	0.57	18.07	1.96	20.04	
RSDC	0.96	8.56	0	25.66	0.035	10.89
	0.75	8.67	0	18.75	0.036	11.87
	0.73	8.81	0	20.49	0.028	25
	0.66	8.88	0	25.39	0.03	29.02
	0.56	8.97	0	16.76	0.034	12.33
	0.61	9.12	0	16.05	0.039	14.22
	0.63	9.19	0	22.04	0.03	11.19
	1.13	9.41	0	23.1	0.021	8.35
	0	9.41	0.58	24.32	4.3	16.58
0.31	9.66	0.61	25.10	4.69	17.55	
SKBBL	0.32	8.8	0.51	17.58	1.73	13.46
	0.39	9.09	0.52	23.09	1.74	15.6
	0.6	9.39	0.51	16.74	1.86	17.14
	0.5	9.6	0.52	18.56	2.25	20.58
	0.53	9.86	0.5	23.2	2.04	23.53
	0	10	0.5	24.17	1.11	20.23
	0.03	10.1	0.51	21.32	2.28	18.9
	0.03	10.17	0.51	22.31	2.27	17.13
	0.03	10.33	0.52	17.05	2.34	16.98
0.04	1.72	0.55	23.58	2.77	15.14	

Source: Annual Report of FMBL, SKBL, GLBSL and Gurans

Descriptive Statistics						
Variables	N	Minimum	Maximum	Mean	Std. Deviation	
DR	40	.00	1.58	.6208	.37792	
FS	40	5.76	10.33	8.6147	1.08730	
CRR	40	.00	.79	.4044	.26323	
CAR	40	.00	198.38	38.8251	34.62028	
ROA	40	.021	4.300	1.54897	1.003585	
ROE	40	.004	29.020	12.46706	8.312783	
Valid N (listwise)	40					

Appendix II

Correlation Coefficients of Dependent and Independent Variables						
Variables	DR	FS	CRR	CAR	ROA	ROE
DR	1					
FS	-0.234 0.169	1				
CRR	0.082 0.634	-0.004 0.983	1			
CAR	.384* 0.023	-0.145 0.407	.350* 0.039	1		
ROA	-0.112 0.515	0.131 0.447	.802** 0	0.225 0.193	1	
ROE	-0.305 0.071	.641** 0	-0.11 0.522	-0.167 0.339	-0.045 0.795	1

Source: SPSS Output

Appendix III

Regression Analysis of DR, FS, CRR and CAR on ROA

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.817a	.667	.624	.61537

a. Predictors: (Constant), DR, FS, CRR, CAR

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	23.512	4	5.878	15.522	.000b
	Residual	11.739	34	.379		
	Total	35.251	39			

a. Dependent Variable: ROA

b. Predictors: (Constant), DR, FS, CRR, CAR

Coefficients

Model	Unstandardized Coefficients	Std. Error	Standardized	t	Sig.
			Coefficients		
B	Beta				
1	(Constant)	-.615	.915	-.672	.007
	Debt Ratio	.014	.313	.005	.046
	Firm Size	.113	.098	.122	.025
	Cash Reserve	3.169	.421	.831	.000
	Capital Adequacy	-.003	.003	-.086	.073

a. Dependent Variable: ROA

Source: SPSS Output

Regression Analysis of DR, FS, CRR and CAR on ROE

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.667a	.445	.373	6.58230

a. Predictors: (Constant), DR, FS, CRR, CAR

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1075.454	4	268.863	6.205	.001b
	Residual	1343.129	34	43.327		
	Total	2418.582	39			

a. Dependent Variable: ROE

b. Predictors: (Constant), DR, FS, CRR, CAR

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-24.377	9.786		-2.491	.018
Debt Ratio	-3.630	3.350	-.159	-1.083	.287
Firm Size	4.670	1.049	.611	4.453	.000
Cash Reserve	-2.929	4.507	-.093	-.650	.521
Capital Adequacy	.003	.037	.014	.090	.929

a. Dependent Variable: ROE

Source: SPSS Output

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