CREDIT RISK MANAGEMENT IN CO-OPERATIVE ORGANIZATIONS IN NEPAL: A STUDY OF RISK MANAGEMENT PROCEDURE AWARENESS

Submitted by:

Pratik Nath Panta

PU Roll no: 18570137

PU Registration no: 2018-2-22-0468

A Graduate Research Report Submitted to

Apex College

Pokhara University

Submitted for the degree of

Master of Business Administration (MBA)

Kathmandu, Nepal

February, 2022

APPROVAL SHEET

Recommendation for Approval

This GRP report prepared and submitted by Mr. Pratik Nath Panta in partial fulfillment of the requirement for the degree of Masters in Business Administration (MBA) has been supervised by me and I recommend it for acceptance.

Name of Supervisor:

Signature:

Date:

Acceptance of the External Examiner

I approve the GRP submitted by Mr. Pratik Nath Panta the grade sheet has been submitted to the Dean, school of Business, Pokhara University through the college on a separate evaluation sheet.

Name of External Examiner:

Signature:

Date:

Viva Examination

The candidate has successfully defended the GRP. We recommend it for acceptance. The grade sheet has been submitted to the Dean, Pokhara University through the college on a separate evaluation sheet.

External Examiner:

GRP Advisor:

Other members:

Date:

CERTIFICATE OF AUTHORSHIP

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by any other person nor material which to a substantial expect has been accepted for the reward of any other degree of a university or other institution of higher learning, except where due acknowledgement is made in the acknowledgements.

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Pratik Nath Panta

ACKNOWLEDGEMENT

The Graduate Research Project entitled "Credit Risk Management in Co-Operative Organizations in Nepal: A study of risk management procedure awareness "has been prepared to fulfill the partial requirement for MBA degree of Pokhara University. My deepest gratitude and acknowledgement goes to all those people who have helped and contributed for timely completion of this project.

I would like to express my sincere gratitude to Prof. Dr. Prem Raj Pant, Faculty Development Advisor, for his inspiring and valuable suggestions that helped me to coordinate my project especially in writing this report. This project would be incomplete without mentioning the name of a person who has helped me from conceptualization to the final stage, with this I would like to extend a huge gratitude to Mr. Kishor Dhungana, my project supervisor.

I am very thankful to Mr. Surendra Raj Nepal for assisting in analyzing the data under the study. Furthermore, I would also like to thank Apex Library Team of Mr. Yogesh Sitaula, Mr. Upendra Chaudhary and Mr. Prajwal Uprety from the bottom of my heart for providing access to use the required resources during my research.

Furthermore, I cannot remain happy without thanking all those respondents who shared their views and ideas, techniques and tricks of managing credit in their cooperative In addition to this, I am very much thankful to NCBL (Nepal Cooperative Bank Limited) for providing me the opportunity to conduct this research . I would also like to thank those friends and colleagues who helped me collect response from cooperatives in this state of pandemic and lockdown. Finally I would like to thank all other stakeholders who have contributed to this study at their best.

Lastly, I extend my deep gratitude to my parents who have given their full dedication for my academic success.

Thank you

Pratik Nath Panta

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EXECUTIVE SUMMARY

Credit risk management is one of the most important aspect of Risk management in cooperative and financial institution in Nepal. Credit risk management includes credit risk management procedures including techniques and tools that help to efficiently and effectively manage the credit in cooperatives. The process of credit risk includes loan portfolio management, credit risk identification, Credit risk analysis, credit risk assessment and credit risk monitoring. With efficient and proper awareness on the variable it is expected that the cooperatives can properly manage the credit situation.

Cooperative is an autonomous body of people brought together voluntarily to meet the common economic, social and cultural need and aspiration by jointly working together for the betterment and development of each member. The organization works with the main idea of "one for all and all for one". In the tradition of their founders, co-operative members believe in the ethical values of honesty, openness, social responsibility and caring for others.

This graduate research project entitled "Credit Risk Management in Co-Operative Organizations in Nepal: A study of risk management procedure awareness" is aimed to understand the credit risk management procedure and awareness on credit risk management. The major objective of this research is to explore the awareness and techniques in credit risk management of cooperatives.

Based on the literature review, various independent variables were identified. These variables includes loan portfolio management, credit risk identification, Credit risk analysis, credit risk assessment and credit risk monitoring. The study was done to determine whether or not the independent variables have significant impact on the dependent variable .The study collected the primary data with the help of self-administered questionnaire. The study was conducted based on the sample size of 147 respondents. The researcher distributed the questionnaire through self-distribution question, telephone calls and personal links. The researcher used convenience sampling method for the research. The research is quantitative in nature. The data from 147 respondents were analyzed using SPSS software where the researcher analyzed respondent profile. Other than that, descriptive analysis, correlation and regression

were also conducted with the help of the software in order to determine the survey results

The demographic analysis show that the maximum cooperative were more than 10 years in the study and most respondents had qualification of Bachelors and Masters. Similarly most respondents said their designation to be credit managers and had maximum had experience of more than 5 years in the organization. Maximum cooperative here were saving and credit cooperative and most believed the level of reckless lending to be 15-50%.

The descriptive data shows that loan portfolio management had average response of 3.99 of 5. , similarly risk identification, risk analysis, risk assessment, risk monitoring and credit risk management had average response of 4.19, 4.048, 4.375 and 4.137 respectively. The correlation of the study suggested that there is positive correlation between the variables and all the correlation were significant. the hypothesis however suggested that loan portfolio management and risk identification had no significant impact on credit risk management but all other variable ie risk analysis , credit risk assessment , and credit risk monitoring had significant impact on the credit risk management

ABBREVIATIONS

ANOVA	Analysis of Variance
GRP	Graduate Research Project
MBA	Masters in Business Administration
S.D	Standard Deviation
Sig	Significance
SPSS	Statistical Package for Social Science
SACCO	Saving and Credit Cooperative

CHAPTER I

INTRODUCTION

1.1 Introduction

Cooperative is an autonomous body of people brought together voluntarily to meet the common economic, social and cultural need and aspiration by jointly working together for the betterment and development of each member. The organization works with the main idea of "one for all and all for one". In the tradition of their founders, co-operative members believe in the ethical values of honesty, openness, social responsibility and caring for others.

A cooperative then is defined as an organization with joint ownership of people engaged in the production or distribution of goods or the supply of services operated by its members for their mutual benefit. These organization are normally organized by the consumer, farmers, producers etc. and are more economic resilient than many other enterprise's-operatives are based on the values of self-help, self-responsibility, democracy, equality, equity and solidarity.

Of the many types of cooperative in existence, one of most common in Nepal is the saving and credit cooperative. A saving and credit cooperative is financial cooperative democratically controlled by its members and operated for the purpose of promoting thrift , providing credit at competitive rates and providing other financial services to its members . An individual must be a member to ensure usage of services and facilities of the organization. These organizations are then involved in the lending and borrowing activity of the rural and urban people. They are directly involved in the financial activity of the nation.

There are large number of cooperatives in Nepal. Cooperative in Nepal is backed by a long and detailed history which efficiently supports the development and expansion of cooperative to present stage. In case of Nepal cooperative started from dhukati , parma , karma vakari and guthi for small community development and now it is integrated in the social and economic developmental for both rural and urban areas . With the intention of further development and advancement , cooperative department was

established under the agricultural ministry in 2010.later his majesty king Mahendra propounded and presented the provisions for management and operation of the cooperative institutions in 2013.under that very provision 5 individual cooperative were established in chitwan in chaitra 20, 2013.

1.1.1 Historical Development of Cooperatives

A cooperative is a nonprofit motive community organization that is owned, managed and directed by the people who use their service, get involved in the voting and management activity, live there or bet some benefit from there. In that sense, a cooperative can be defined as a joint ownership of people engaging in the production or distribution of goods or the supplying of services, operated by its members for their mutual benefit. This type of organization is typically organized by consumers and farmers and are more economic resilient than many other enterprise. Co-operatives are based on the values of self-help, self-responsibility, democracy, equality, equity and solidarity.

The cooperative movement started in Europe in the 19th century. The industrial revolution and the increasing mechanism of the economy transformed society and threatened the livelihoods of many workers. International Co-operative Alliance (2015) defines cooperative as an autonomous association of persons unified voluntarily to meet their common economic, social and cultural needs through a jointly-owned and democratically-controlled enterprise.

The co-operative concept in the form of Guthi, Parma, Dhikuri, Dharmabhakari etc has been used from a very beginning in Nepalese societies (Poudel & Mamoru, 2014). Characteristics of these historical social institutions have almost resembled with the primary form of co-operatives. Institutionally and formally government established the Department of Co-operative under the Ministry of Planning, Development, and Agriculture in 1953 A.D.

Beginning in the 1980s a new generation of community based savings and credit groups began to emerge in Nepal. The Cooperative Act was amended for the third time to give the Government more control. By this time the Savings and Credit movement had spread throughout the country and the need for an apex coordinating body was evident.

In August 16, 1988, the Nepal Federation of Savings and Credit Cooperative Unions (NEFSCUN) was formed. (NEFSCUN, 2015)

First modern cooperative movement started from Chitwan District as a part of flood relief and resettlement program. Thirteen credit co-operatives were established in 2013B.S. and the legal support soon followed in 2016B.S. as Cooperative Societies Act 2016B.S. was enacted. This first Co-operative Societies Act was frequently brought under revision and was replaced by the Sajha Societies Act in 2041B. In 1963, the capital of savings and credit cooperative societies was converted into a Cooperative Bank in 1963, and in 1968 it was also converted into the Agricultural Development Bank of Nepal (ADBN). After 5 years the ADBN returned management back to the government and in 1975 the Cooperative Act was amended again.

After people's movement of 2046 B.S. the Sajha Societies Act was replaced again by the Cooperative Act 1992. The Department of Co-operative is now the body providing authority for registration and regulations of cooperatives in Nepal. After people's movement the new democratic government enacted the Co-operative Act and the Co-operative Regulations in 1992 and 1993 which permitted the establishment of a three tiered co-operative system, and provides a legal base both for the establishment of co-operative societies/unions/federations and application of co-operative values, norms and principles into practice.

1.1.2 Present Situation of Cooperatives

At present there are regulations and guidelines from various cooperative regulatory authority that assist the organization in smooth and efficient operation and management of risks. Nepal has also been a member of the ICA (international cooperative Alliance). ICA currently has five members from Nepal.

- National Cooperative Federation of Nepal (NCF)
- Nepal Agricultural Cooperative Central Federation Ltd. (NACCFL)
- National Cooperative Bank Ltd. (NCBL)
- National Cooperative Development Board (NCDB)
- Nepal Multipurpose Central Cooperative Union (NEMCCU)

These member or regulators of cooperative help to assist and support the cooperative organization in smooth and efficient operation and management or organization. One of such guideline is the waiting time of 3 months for the member to apply for loan or credit. With proper guidance and control from the regulatory body the number of cooperative in Nepal has been increasing. The current condition of cooperative in Nepal is presented in the table below.

Table 1.1 Cooperative statistics in Nepal (NCF, 2019-2020)

Number of cooperatives	**34,837**
Number of memberships	6.5 million
Number of employees	68,400

This data presents an overview of scale of involvement cooperative society has in the economy. Considering the above information individuals can assume the level of impact cooperative organization has in the economy and on individual level. This can be made clearer with 2017 data presented in the Federal Democratic Republic of Nepal-Key Figures Highlights as below.

Table 1.2 Cooperative statistics in Nepal (NCF, 2017)

Sector	Number of cooperatives	Number of memberships	Number of employees
Agricultural (Includes allied sectors like livestock, dairy, tea, etc.)	13,407	1,266,704	8787
Communication	143	17,053	556
Consumer service	1423	70725	671
Electricity	463	81370	418
Financial (savings and credit)	13578	3445554	35447
Health	128	14453	880
Multipurpose	4371	1273777	12085
Others	999	143945	1673

Based on the above data and information, one can easily assume that Cooperative societies are directly related to the growth and upliftment of members and society through involvement and assistance in almost every sector and project. There are more than 6.500.000 members and 68400 employees associated with about 34000 cooperative in Nepal. These organizations are involved in inclusion programs of women, Dalits poor and oppressed groups, agricultural upliftment, financial assistance and awareness health etc. and should be given support and assistance.

However, dealing with many people, based on trust and cooperation alone the organization face many problems and large scale risks. This has resulted in many cooperative organization run to close down or complete failure. Some of the reasons identified for failure of the cooperative movement in the country include: lack of national vision for the cooperative movement, lack of adequate monitoring, lack of inclusion of every sector of society in the cooperative movement, lack of managerial

skills and professionalism, lack of working capital, lack of technological support and development, and lack of credibility (Mishra, 2013).Apart that there are also many organizational risks that influences the failure of the organization.

Being an institute dealing with large amount of depositors fund in lending and deposit there is a major risk of credit. So it is very important to realize and understand the risk associated with the credit in an organization. Credit risk is the risk of loss when a borrower fails to meet his contractual obligation to repay the debt in accordance with the agreed terms. The effective management of credit risk is crucial for the long term success of any financial organization and it is a critical component of a comprehensive approach to risk management. Credit risk management in any financial organization plays vital role in maximizing risk-adjusted rate of return and it also helps to maintain the credit risk exposure within acceptable parameters. Credit risk management is a structured approach to managing uncertainties through risk assessment, developing strategies to manage it, and mitigation of risk using managerial resources. The strategies include transferring to another party, avoiding the risk, reducing the negative effects of the risk, and accepting some or all of the consequences of a particular risk.

Credit risk management practice is a prearranged approach to managing uncertainties through risk assessment, analysis, monitoring and developing the strategies to mitigate the risk. The credit risk management strategies basically focus to transferring, avoiding, reducing the negative impacts of the risk. The process of credit risk management has four folds. The first is to understand the risk related to the credit. The understanding of the credit risk is a foundation of the credit risk management process. The second fold is to identify the source of the credit risk, which is to identify the leading factors causing the credit risk. The third fold is an assessment and analysis of the risk. The assessment and analysis is a technique to quantify the risk level entire the certain credit portfolio and individual credit account. The fourth fold is the monitoring and controlling of the credit risk, which is a preventive approach for bank and financial institutions.

In today's fast-moving financial institution related to lending and borrowing are exposed to a large number of credit portfolios. In the same manner, they face various types of credit related risk during the credit management process. Due to the negative effects of the risks, efficient and effective risk identification tools are required for the sound management system. Risk management is one of the basic tasks to be done, once it has

been identified the risk and its factors of the borrowers. The heart of good risk management is the identification and handling of risks. Its aim is to enhance maximum sustainable value to all the activities of the banks. Risk management in the financial sector is very significant that all sectors of the economy. As the main objective of the institution is to maximize revenues and offer the maximum value to the shareholder.

Therefore, risk management risk assessment, development of strategies to manage it and mitigation of risk using executive resources. . The strategies include transferring to another party, avoiding the risk, reducing the negative effects of the risk, and accepting some or all of the consequences of a particular risk. Risk management as a technical discipline has become a standard area of business practice in recent years. Robust risk management practices in the financial sector are important for both financial stability and economic development. The development of adequate capacity to measure and manage risks is also important for financial institution to effectively perform their roles in financing economic activities, most especially the task of continuously providing credit to a large number of enterprises whose activities underpin economic growth.

Therefore Risk management is the identification, assessment and analysis of risk. It also focuses on coordinating the application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities. Though there are certain governing bodies that attempt to regulate and understand the situation of cooperative in Nepal and assist in the credit risk management procedure in the organization there are many examples where the cooperative organization have been unable to manage the credit risk. This has resulted in the erupting noise from depositors and Medias about failing cooperative society, lack of proper regulation and lack of basic awareness about credit risk management in cooperative organization.

The paper discusses and analyses the current practices in loan portfolio management, credit risk identification, credit risk analysis, credit risk assessment and credit risk monitoring and its impact on credit risk management of Cooperative organizations of Nepal. It focuses the tools and methods used in cooperative and awareness and need of the cooperative for credit risk management in Nepalese cooperatives.

1.2 Statement of the Problem and Research Questions

Financial institutions have been in existence for a long period of time. These are the institution that deals with the public through the mechanism of deposit and lending. These organizations are facilitating the flow of fund in the nation. However, what the global financial crisis have shown is that these financial institution, are so such integrated with the national economy that any negative impact with the organization directly hampers the national economy.

Through these events we came to realize that not all organization and institution can actually get accustomed to and manage the risk and difficulties associated with financial management in the current world, on their own. That is one of the many reasons why these institutions are governed and managed by the autonomous body.

That being said, one of the large composite of the organization, Cooperative, are not specifically guided and directed by any such high level governing bodies. So as evident by many past research and empirical studies show that they suffer weak credit management which is the primary cause of many financial institutions failure. It is more important to research and advocate the level and state of credit risk management in the cooperative organization.

More over the recent highlight of cooperatives being unable to manage the credit situation resulting in bankruptcy and shutdown, highlighted in media and national level is only a glimpse of what the situation of cooperative is in Nepal. Cooperative handles small amount from large number of small and local depositors. Considering that, a failure of cooperative organization impacts on large number of small and unprivileged group of the society. An idle situation is when a cooperative is well aware about all the techniques and procedures that help to manage and mitigate the risk from borrower. So proper research is always required to understand the status and situation of cooperative in the country.

There are many question and statement this research attempts to put forward understanding which will help make cooperative safer and further safeguard their trust, financial status, and integration in individual and national level. Some of the major questions put forward by the research are as follows.

- Is there significant impact of loan portfolio management in Nepalese cooperative organizations for credit risk management?
- Is there significant impact of credit risk identification in Nepalese cooperatives with credit risk management?
- Is there significant impact of credit risk analysis in Nepalese cooperatives with credit risk management?
- Is there significant impact of credit risk assessment in Nepalese cooperatives with credit risk management?
- Is there significant impact of credit risk monitoring in Nepalese cooperatives with credit risk management?

Thus, this study thus seeks to investigate and research on the level of awareness on credit risk management procedure for sound and effective credit risk management in Nepalese Cooperative.

1.3 Objectives of the Study

- To examine the impact of loan portfolio management on credit risk management in Nepalese cooperative organizations.
- To access the impact of credit risk identification on credit risk management in Nepalese cooperatives.
- To determine the impact of credit risk analysis on credit risk management in in Nepalese cooperatives.
- To examine the impact of credit risk assessment credit risk management in in Nepalese cooperatives.
- To determine the impact of credit risk monitoring on credit risk management in Nepalese cooperatives.

1.4 Research Hypothesis.

- H_1 : There is significant relationship between loan portfolio management and credit risk management.
- H_2 : There is significant relationship between risk identification and credit Risk management.

- H_3 : There is significant relationship between risk assessment and credit risk management .
- H_4 : There is significant relationship between risk monitoring and credit risk management.

1.5 Significance of the Study

Cooperative is an autonomous organization with large number of people's involvement directly and indirectly in monetary transaction and management. The total number of cooperatives according to Department of Cooperatives in 2073/74 is 34,512 where a total of 6309981 (3213514 female & 3092067 males) are members. One of the factors that have contributed to the rapid expansion in both the number and the enterprise coverage of cooperatives is the new policy and legal regime allowing grassroots-based spontaneous initiatives of communities to organize themselves into cooperatives for doing business and serving the communities. (Cooperatives data, 2016).These cooperative organizations involve in monetary transaction management activity of lending, investing and recovering. In that sense, cooperative organization faces many risks, especially the credit risk. The government of Nepal has embraced cooperative as one of the three pillars of the economy, cognizant of their power and evolving prospects to contribute to poverty reduction, service delivery, gender quality and good governance.

So, it is very essential to evaluate and understand the level of credit risk awareness about procedure and techniques in the organization to ensure their smooth survival and efficient operation. Thus, this study seeks to investigate and research on the level and credit risk management practices in Nepalese Cooperative.

The study will provide the reader with an independent unbiased view of credit risk management awareness and techniques procedure status followed in cooperative organization of Nepal. It will help them to be aware of their approaches to credit risk management. It will also highlight on the practices that are hindering in effective implementation of CRM in their cooperatives so that managers can therefore work on those areas.

Finally this study will also help the cooperative and financial governing bodies to understand the situation of credit risk and take measures through policy and guidelines to control and mitigate the risks.

1.6 Limitations of the Study

This study has number of limitations, and some of them are enlisted below:

- There is time and resource constraint as the study has to be completed within limited timeframe.
- Very limited study has been done in this field in Nepal. So, this study is primarily based on limited secondary data.
- It is quantitative analysis and doesn't cover the qualitative analysis regarding how effective the study is.
- Variables are limited, which may lead to less consistency in finding the relationship as expected.

Research Chapter plan

This report will be divided into five chapters excluding preliminary sections which include title page, approval page, and acknowledgement, table of contents, list of tables and figures, acronyms, abstract and Appendix

Chapter I: Introduction

It is the introduction chapter which includes background of the study, statement of the problem, Objectives of the study, significance of the study and limitations of the study.

Chapter II: Review of Literature and Theoretical Framework

It deals with review of literatures which includes conceptual, theoretical reviews and review of related studies or this chapter explains the review of the related literature done in national and international levels.

Chapter III: Research Design and Methodology

It is the research methodology which includes research design, population and sample, sources of data, data collection techniques and data analysis tools.

Chapter IV: Results and Discussion

Data collected would be carefully examined and conclusion would be drawn. So that is could be presented. It deals with the presentation of data collection in table and analysis using rank correlation and necessary tools and interpretation of the result. And include general findings of the study and major findings of the study.

Chapter V: Summary, Conclusion and Recommendations

It includes summary, conclusion of the study and the suggested recommendations

CHAPTER II

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Many works have been done in the area of credit risk management in cooperative around the world. Most of the literature focuses on the need of managing the credit risk for efficient and long operation of the cooperative organization. Among these some previous literature works provide a better guideline for this research and its frame work. This literature work is based on a defined theory and idea. The theory is mentioned in the theorical Review, followed by detail description of other work in conceptual review.

2.1 Theoretical Review

Portfolio Theory

Since the 1980s, companies have successfully applied modern portfolio theory to market risk. Many companies are now using value at risk models to manage their interest rate and market risk exposures. Unfortunately, however, even though credit risk remains the largest risk facing most companies, the practice of applying modern portfolio theory to credit risk has lagged (Margrabe, 2007).

Companies recognize about how credit concentrations can adversely impact financial performance. As a result, a number of institutions are actively pursuing quantitative approaches to credit risk measurement. Industry is also making significant progress toward developing tools that measure credit risk in a portfolio context. They are also using credit derivatives to transfer risk efficiently while preserving customer relationships. Portfolio quality ratios and productivity indicators have been adapted (Kairu, 2009) . The combination of these developments has vastly accelerated progress in managing credit risk in a portfolio context.

Traditionally, organizations have taken an asset-by-asset approach to credit risk management. While each company's method varies, in general this approach involves periodically evaluating the quality of credit exposures, applying a credit risk rating, and aggregating the results of this analysis to identify a portfolio's expected losses. The foundation of the asset-by-asset approach is a sound credit review and internal credit risk rating system. This system enables management to identify changes in individual

credits, or portfolio trends in a timely manner. Based on the changes identified, credit identification, credit review, and credit risk rating system management can make necessary modifications to portfolio strategies or increase the supervision of credits in a timely manner. While the asset-by-asset approach is a critical component to managing credit risk, it does not provide a complete view of portfolio credit risk, where the term risk refers to the possibility that actual losses exceed expected losses. Therefore, to gain greater insight into credit risk, companies increasingly look to complement the asset-by-asset approach with a quantitative portfolio review using a credit model (Mason and Roger, 1998). Companies increasingly attempt to address the inability of the asset-by-asset approach to measure unexpected losses sufficiently by pursuing a portfolio approach. One weakness with the asset-byasset approach is that it has difficulty identifying and measuring concentration. Concentration risk refers to additional portfolio risk resulting from increased exposure to credit extension, or to a group of correlated creditors (Richardson D. , 2002).

Information Theory

Derban, Binner and Mullineux (2005) recommended that borrowers should be screened especially by banking institutions in form of credit assessment. Collection of reliable information from prospective borrowers becomes critical in accomplishing effective screening as indicated by symmetric information theory. Qualitative and quantitative techniques can be used in assessing the borrowers although one major challenge of using qualitative models is their subjective nature. However according to Derban, Binner and Mullineux (2005) borrowers attributes assessed through qualitative models can be assigned numbers with the sum of the values compared to a threshold. This technique minimizes processing costs, reduces subjective judgments and possible biases. The rating systems will be important if it indicates changes in expected level of credit loan loss.

Brown (1998) concluded that quantitative models make it possible to numerically establish which factors are important in explaining default risk, evaluating the relative degree of importance of the factors, improving the pricing of default risk, screening out bad loan applicants and calculating any reserve needed to meet expected future loan losses.

2.2 Conceptual Review

Wambugu (2010) Attempted to investigate the level and status of credit risk in the peripheral area. The main objective of the study was to examine Credit risk management practices in saving and credit Cooperatives with Front Office Service Activity in Kenya. The researcher points out that problem of risk management often began right at the loan application stage and increased further at the loan approval, monitoring and controlling stages, especially when credit risk management guidelines in terms of policy/procedures did not exist or were weak or incomplete. The research design of the study was based on a descriptive survey. The sample of the study consisted of credit managers and managers employed in the 40 saving and credit Cooperatives offering FOSA services within Nairobi Province. The data was collected using self-administered questionnaires by the researcher, coded and Statistical Package for Social Science Version 17 was used to analyze. The research found out that loan portfolio management, risk identification, risk analysis and assessment as well as risk monitoring were instrumental in credit risk management process. Saving and credit Cooperatives should fully embrace credit risk management as way to reducing credit defaults (Bekiroglu, Takci & Ekinci, 2011).

Maina, Kinyariro and Muturi (2016) inquired the influence of credit risk management on loan Delinquency in saving and credit cooperative. Here, the objective was to determine the influence of credit risk control and collection policy on loan delinquency. The researcher adopted a descriptive research design and the population consisted of all the 44 credit officers of saving and credit Cooperatives in Meru County. Questionnaire was used to collect data. Multiple linear regressions were used in data analysis. Analyzed data was presented in percentages and frequency tables. The study revealed that there exist a strong relationship between credit risk controls, collection policy and loan delinquency in saving and credit Cooperatives. Thus, the study concludes that credit risk management practices significantly influenced loan delinquency in saving and credit Cooperatives in Meru County. The study further recommends adoption of a more stringent policy on credit risk management practices in saving and credit cooperatives for effective debt recovery.

Credit risk management mainly focuses on establishing system well laid down procedure for approving new credit and as extension of existing credit facility to its

customers. These procedures also include risk monitoring with utmost care and other necessary steps to control the risk and mitigate the risk of connected lending as well (Basel, 1999). This along with much other research suggests the idea that, credit risk must be properly managed to ensure financial security and stability of both the organization and its customers (Benjamin, 2015).

Nyambere (2013) Undertook research to understand the effect of credit risk management on financial performance of deposit taking saving and credit cooperatives in Kenya. The research objective was to determine the effect of credit risk management on financial performance of deposit taking Savings and Credit Co-operative Societies in Kenya. The researcher adopted a cross sectional survey research design in this study. The population for this study was therefore, all heads of credit risk management function in the 215 total number of deposit taking saving and credit Cooperatives that are under supervision by SASRA. The researcher utilized probability sampling using simple random sampling where every member of the population has an equal chance of being selected. The study's sample size (*n*) was thirty, which according to Mugenda & Mugenda (2003) n=30 is sufficient for such a study. Primary and secondary data was used for the study. Data analysis method was based on Pearson correlation analysis and a multiple regression model whereby the dependent variable was the financial performance of the saving and credit Cooperatives which was measured using Return on Equity (ROE) whereas the independent variables were the CAMEL components of Capital adequacy, Asset quality, Management efficiency, Earnings and Liquidity. Research findings indicated that the model had accounted for 62.3% of the variance in Return on Equity (ROE) of Kenyan Saving and credit Cooperatives over the study's period, that is, 2010 - 2012. This finding indicates that 37.7% of Kenyan Saving and credit Cooperatives financial performance was accounted for by other factors (variables) not tested in the study's model.

Such factors could be related to the external business environment that the Saving and credit Cooperatives operate in, especially the socio-economic factors that highly impact on the Saving and credit Cooperatives customers (members) ability to save and borrow. Findings also indicated that there was sufficient evidence that the model is useful in explaining the financial performance (ROE) of Kenyan Saving and credit Cooperatives as it was significant at 95% confidence level (p=0.002). Moreover, there was positive

relationship between financial performance (ROE) and all the tested independent variables at 0.179, 0.063, 0.240, 0.003 and 0.160 for Capital Adequacy, Asset Quality, Management Efficiency and Earnings Liquidity respectively. In line with the findings and conclusions of the study the following were recommended that on the effect of credit risk management on the financial performance of Saving and credit Cooperatives in Kenya, management should carefully consider the Capital Adequacy, Asset Quality, Management Efficiency, Earnings and Liquidity as they all positively correlate with the Return on Equity of the Saving and credit Cooperatives.

Moreover, management of Saving and credit Cooperatives in Kenya should ensure that adoption and implementation of sound credit risk management practices, that there is appropriate credit risk policy in place, that there is appropriate risk-return tradeoff policy, that there exists favorable internal business environment and that appropriate credit risk limits are set as they impact on the financial performance of the Saving and credit Cooperatives. The government and other stakeholders should ensure that there is favorable external business environment for saving and credit Cooperatives in Kenya. Finally, with regard to the obstacles facing credit risk management by Kenyan Saving and credit Cooperatives, management should overcome inadequate knowledge among the implementing staff/managers by providing the necessary knowledge through training and promotion of further studies in Risk Management-among their staff (Van Greuning & Bratanovic, 2020).

Kariuki (2017) Advocated to understand the effect of credit risk management practices on the financial performance of deposit taking saving and credit cooperatives in Kenya. The study analyzed the effect of credit risk management practices on financial performance of deposit taking saving and credit Cooperatives in Kenya by adopting descriptive research design and the population comprised of 164 SACCO registered under the SASRA. The objectives of the study was to establish the effect of credit risk identification, credit analysis practices, credit monitoring and credit mitigation measures on the financial performance of DTSs. Based on the study findings the study concluded that credit analysis, credit mitigation measures and credit risk identification have a significant positive effect on financial performance. The study recommended that saving and credit Cooperatives should have stringent credit analysis techniques and that it should also adopt credit monitoring practices. The study also recommended that

saving and credit Cooperatives and any other credit lending organization should have a stringent credit mitigation measures and policies. Therefore, the credit committees at all levels must work in co-ordination in order to ensure that credit is collected in a timely manner (Makori, Munene, & Muturi, 2013).

From the above mentioned few literary works done in the field of credit risk management in cooperative we can clearly understand that there is significant impact of credit risk management on the financial growth and survival of the organization. Hence financial institutions especially cooperative organization in case of Nepal, which has no strict and defined governing and controlling body, must work to manage the credit risk in the organization to ensure best and efficient operation of the organization. This idea has been explored in much detail by Aduda and Obondy (2021) the objective of the paper was to conduct literature review on how credit risk management impacts efficiency and to identify the knowledge gaps in the relationship between the two variables. This study was expected to help the government in policy direction as far as growing the financial sector as a precursor to credit risk management and its contribution to growth in terms of improved savings, improved per capita income, improved credit to private sector and increased employment levels both directly and indirectly. From the empirical studies reviewed, credit risk management was found to influence financial performance but there is no concrete evidence on the relation that credit risk management has with efficiency of saving and credit Cooperatives. However, the researcher clearly identified the credit risk management process as identification of the risk followed by analysis of the risk and ending at control and mitigation of the risk (Ogilo, 2012).

Gakure, Ngugi, Ndwiga and Waithaka (2012) published an article to understand the effect of credit risk management technique on the performance of unsecured bank loans employed commercial bank in Kenya. The purpose of this study was to investigate the effect of credit risk management techniques on the performance of unsecured bank loans by commercial banks in Kenya. The study used descriptive research design. The target population of this study was management staff working in commercial banks of the top, middle and low-level management ranks. The sample size was 39 respondents. The data collection instruments were questionnaires. Quantitative data collected was analyzed by descriptive statistics using SPSS and presented through percentages,

means, standard deviations and frequencies. From the study, it was observed that risk identification affects the performance of the unsecured loans to a moderate extent as indicated by a mean of 2.5; Inspection by branch managers affected the performance of unsecured bank loans to a great extent as indicated by a mean of 2.3; financial statement analysis also affected the performance of unsecured bank loans to a great extent as indicated by a mean of 2.1; Establishing standards affected the performance of unsecured bank loans to a great extent as indicated by a mean of 1.7, Credit scoring affected the performance of unsecured bank loans to a great extent as indicated by a mean of 1.6, Risk rating and collateral and Credit worthiness analysis affected the performance of unsecured bank loans to a great extent as indicated by a mean of 1.5.

The study revealed that the credit manager established the crucial observation areas inside and outside the bank as indicated by a mean of 2.5, the that the departments and the employees are assigned with responsibilities to identify specific risks as indicated by a mean of 1.7, and that risk identification is positively significant to influence risk management practices as indicated by a mean of 1.6.

Relation of Loan portfolio management with credit risk management

This idea is based on the theory of portfolio diversification for maximization return with least standard deviation or risk. The theory was conceived and advanced by Markowitz (1952). The theory asserts that there are four steps in the construction of portfolio as: security valuation, asset allocation, portfolio optimization and the performance management (Seibel, 2012). According to the theory, many companies use models for value at risk to manage market risk and interest rate risk exposures. According to Margrabe (2007), in spite of credit risk remaining the significant risk that faces most saving and credit Cooperatives, the habit of utilizing this theory to credit risk management is yet to be fully embraced. The theory, hence, seeks to bring forth the significance of credit risk management for the saving and credit Cooperatives to remain efficient. That being said, few works have been done in the area of loan portfolio management for credit risk management in financial institutions. Although each SACCO ‘s mechanisms vary, the common practice approach involves the periodical assessment of credit quality, credit exposures, application of a suitable credit risk rating, and also aggregating the outcome of the assessment to establish a portfolio ‘s anticipated losses (Waithaka, 2012). Gakure et al. (2012) stated that the basis of the

asset-by asset approach is a sound loan appraisal and effective internal credit risk rating systems. Using this approach, a loan appraisal and credit risk rating system allows the management to establish key changes in an individual's credits, or portfolio on time.

Mokaya and Jagongo (2014) Attempted to understand the relation between the corporate loan diversification and management with credit risk management in commercial bank of Kenya. This study therefore sought to establish the association between corporate loan portfolio diversification and credit risk management among commercial banks in Kenya. The specific objectives of the study included: to determine the relationship between geographical diversification and credit risk management, to establish the relationship between industry diversification and credit risk management and to establish the relationship between the size of borrowing company and credit risk management among the commercial banks in Kenya. The study employed descriptive research design. The study targeted 86 respondents. Data was collected by use of a questionnaire. The obtained data was cleaned; coded and statistical outputs generated using SPSS. Descriptive and inferential statistics were used to analyze the data. The study found out that there was no association between geographical diversification and credit risk management, an association between industry diversification and credit risk management and an association between size diversification and credit risk management at the banks. The researcher concludes that it was concluded that corporate loan portfolio diversification had a strong association with credit risk management among commercial banks in Kenya. That there existed a significant relationship between industry diversification and credit risk management among commercial banks in Kenya and that there existed a significant relationship between size of the borrowing company and credit risk management among commercial banks in Kenya. (Siami & Hajimohammadi, 2013)

Onuko, Muganda and Musiega (2015) addressed the Effect of Credit Risk Management on Loan Portfolio on the research work. The objective of the study was to determine the effect of credit risk management on loan portfolio Quality of Tier One commercial banks in Kenya. The study used loan pricing as the independent variable while loan portfolio quality as the dependent variable. The quality of the loan portfolio was measured by use of none performing Assets (NPA's).The study employed descriptive research design. Five tier one commercial banks in Kenya were analyzed. Financial

reports for the five banks were analyzed between the years 2009-2013. A sample of 35 was obtained through purposive sampling technique. Data was collected through both primary and secondary methods. Data was analyzed by use of descriptive statistics and further by use of regression model run on Statistical Package for Social Sciences (SPSS) version 20. The findings indicated loan pricing had significant positive effect on the level of NPA and it accounted for 57.4% change in level of NPA.

Lagat, Mugo and Otuya (2013) published research on the Effect of Credit Risk Management Practices on Lending Portfolio among Savings and Credit Cooperatives in Kenya. in the research the researcher purpose of this study was to examine the effects of credit risk management practices on lending portfolio among Sacco's in Nakuru County, Kenya. Data on risk identification, risk analysis, risk monitoring, risk evaluation and risk mitigation obtained from 59 Sacco's sampled from among saving and credit Cooperatives in Nakuru County were analyzed using regression models to identify its effect on lending portfolio. Results indicate a significant effect of all the risk management practices on lending portfolio except risk evaluation which did not register a significant effect on the lending portfolio of the Sacco's. The findings further show that majority of the Sacco's have largely adopted risk management practices as a means of managing their portfolio (Moti, Masinde, & Mugenda, 2012) .

Magali (2014) Undertook research to understand the effectiveness of loan portfolio management in rural saving and credit cooperatives. This article uses 496 loans from ABC rural saving and credit cooperatives located in the Northern zone of Tanzania to describe the effectiveness of loan's portfolio management. The data analysis is done by using the multivariate regression, descriptive and qualitative methods. The data for this study was collected at the end of May 2013. The findings reveal that women constituted 52.6% of the loan portfolio. Also the doubtful and bad loans were 51 and 31 million TZS which was more than 10% of the loan portfolio. The findings show loans were aged into 4 classes and the loans aging was not very effective because loans of different ages were classified in a single class. The results from the regression analysis reveal that the quality of loan portfolio was positively influenced by the loan size while the influence of gender and location of the borrowers were not significant. Moreover, ABC rural saving and credit cooperatives used portfolio diversification, collateral, guarantors, letter from the village/ward government offices and the affidavit from the

lawyer as credits risk mitigation techniques. The findings also revealed that fluctuation of the price of agricultural produce threatened the quality of loan portfolio. This article recommends that ABC rural saving and credit cooperatives should seek the effective insurance services, use the effective software for loan portfolio management, search the market for agriculture produce, write off non repaid loans, enhance the repayment of overdue loans and revise the loan classes and maturity in order to improve the quality of the loan portfolio in the saving and credit cooperatives (Ghasemi & Donyayi-Haris, 2016).

George, et al., (2013) Presented idea of an analysis of loan portfolio management on organization profitability. The aim of this study was to close the gap in knowledge by investigating profitability determinants within commercial banks in Kenya. The determinants studied were loan portfolio, interest expense, and administration costs and assets value. A descriptive survey design was employed in this study. The population of the study was the management employees working for commercial banks in Kenya. The sample was accessed by use of both stratified and simple random sampling. A questionnaire was used to gather the primary information. The questionnaires were self-administered and were served to the respondents by self-introduction. Research assistants were used to follow up on duly completed questionnaires. Statistical package for social sciences (SPSS) was used to analyses primary data while the SAS v.6 of 2009 was used to analyses the secondary data gathered from the banks. Findings of the study showed that public sector banks and private sector banks were not much affected by increasing or decreasing of interest margin. This study sought to analyses whether profitability measures were associated with increments or decline on loan portfolio, interest expense, administrative cost, and asset value at the organizational level. The study makes several contributions to the literature. In doing so, this study provides the first reliable evidence of the association of the four indicator factors on financial performance at the organizational level (Kothari, 2004) .

Bosco and Faustin (2016) Contributed to the study of analysis of loan portfolio management for financial profitability and sustainability of Umwalimu SACCO in Rwanda. This paper with aim of answering problem statement of “how does loan portfolio management contribute to MFI’s financial profitability and sustainability” employed the methods of data collection and analysis. Both primary and secondary data

were collected then analyzed through MFI Factsheet 3_4, SPSS 16 tools (Pearson correlation, and multi regression analysis), so that the correlation and strength between variables can be determined. The analysis found the p value significance between amount disbursed, gross loan, PAR (loan management indicator) and interest rate, loan duration (credit policy indicator), with expected sign, and between cost ratio, net margin and operating margin, profitability indicators, and PAR and loan loss reserve ratio, the loan management indicators, some of them with contrary expected sign, The total asset towards sustainability variables (ROE, ROA, ROE excluding donations, ROA excluding donations), some of them has contrary expected sign after the consideration of the lowest p= 0.009 and the highest significance level of p=0.032 all of them and concluded that credit decisions are strongly influenced by credit policies. Therefore, credit policies can have significant impact on the success of an institution. For example, if a credit policy is too risk averse it will hamper credit provision to marginal but potential creditworthy borrowers resulting in or contributing the institution failing to achieve its revenue goals (Beykzadeh & Aghazadeh , 2014).

Relationship of credit risk identification with credit risk management.

Often times, problem identified is the first step to problem solved. Based on this very idea, Kattel (2015) discussed the in Credit Risk Identification Techniques Followed by Commercial Banks in Nepal the methods that guide and direct the institution to identify and manage the credit risk. The main purpose of this study was to explore the current credit risk identification techniques used by Nepalese commercial banks. Here, a questionnaire was developed and surveyed to 9 commercial banks operating in Nepal. This paper attempted to ascertain the perceptions of Nepalese bankers about the importance of credit identification techniques and the practice of various tools to identify the risk related with the borrowers. The result of the study indicated that the Nepalese bankers were aware of the importance of various techniques to effectively identify the risk level. Furthermore, the Nepalese commercial banks have used various techniques like interview, root cause effect, check list analysis, Strength, Weakness, Opportunity and Threat (SWOT) analysis, scenario analysis, expert judgment, simulation, stress testing etc (Nawai & Shariff, 2010).

Bagchi (2003) examined the credit risk management in banks in India. He examined risk identification, risk measurement, risk monitoring, and risk control and risk audit as

basic considerations for credit risk management in banks. The author concluded that the proper credit risk structural design, policies, procedures and framework of credit risk management, credit rating system, monitoring and control contributes to success of credit risk management system in the banking industry.

Kalu, Shieler and Amu (2018) presented a study paper the objective of this study was to evaluate whether relationship exist between credit risk management techniques and financial performance of microfinance institutions in Kampala, Uganda. Specifically, the study examined whether there is a relationship between credit risk identification, credit risk appraisal, credit risk monitoring, credit risk mitigation and financial performance of microfinance institutions in Kampala using sample of 60 members of staff in finance and credit departments of three licensed microfinance institutions in Kampala, Uganda namely Finca Uganda Ltd, Pride Microfinance Ltd, UGAFODE Microfinance Ltd. Primary data was collected using questionnaires and it comprised of closed ended questions. Secondary data was collected from the microfinance institutions (MDI's) annual reports (2011 - 2015). Frequencies and descriptive statistics were used to analyses the population. Pearson linear correlation coefficient was adopted to examine relationship between credit risk management techniques and financial performance. The findings indicate that credit risk identification and credit risk appraisal has a strong positive relationship on financial performance of MDIs, while credit risk monitoring and credit risk mitigation have moderate significant positive relationship on financial performance of MDIs. The study recommends, among others, that the credit risk appraisal process should identify and analyses all loss exposures, and measure such loss exposures. This should guide in selection of technique or combination of techniques to handle each exposure. The study concludes that MDIs should continually emphasize effective credit risk identification, credit risk appraisal, credit risk monitoring, and credit risk mitigation techniques to enhance maximum financial performance (Ravinder & Aggarwal, 2011) .

Mwirigi (2006) indicated that it was important for firms to ensure that risk management function is established throughout the whole corporation that is the parent companies including subsidiaries have to identify and analyze all risks. There are many approaches for risk identification for instance, scenario analysis or risk mapping. An organization can identify the frequency and severity of the risks through risk mapping which could

assist the organization to stay away from high frequency and low severity risks and instead focus more on the low frequency and high severity risk. Risk identification process includes risk-ranking components where these ranking are usually based on impact, severity or dollar effects (Christen & Pearce., 2005) . Accordingly, the analysis helps to sort risk according to their importance and assists management to develop risk management strategies to allocate resources efficiently.

In relation to commercial banks' practice of risk management, Al-Tamimi H (2002) found that the United Arab Emirates (UAE) commercial banks were mainly facing credit risk which they identified through inspection by branch managers and financial statement 20 analysis methods. The main techniques used in risk management are establishing standards, credit score, credit worthiness analysis, risk rating and collateral. The recent study by Al-Tamimi and Al-Mazrooei (2007) conducted on banks' risk management of UAE national and foreign banks revealed that the three most important types of risks encountered by UAE commercial banks are foreign exchange risk, followed by credit risk and finally operating risk

In case of financial institutions like banks, studies made especially on risk identification and risk mitigation includes the work of Haron and Hock (2007) on market, credit risk and specifically on operational risk. They explain the inherent risk in banks; credit and market risk exposures and they illustrate the notion of displaced commercial risk that is important in Banks.

Relationship of Credit risk analysis with credit risk management

Clear efforts have been made to support credit risk analysis for credit risk management. Lai, Yu, Wang and Zhou (2006) published a model in conference as lecture notes to help supports understanding of credit risk analysis. According to the lecturer Credit risk analysis is an important topic in the financial risk management. Due to recent financial crises and regulatory concern of Basel II, credit risk analysis has been the major focus of financial and banking industry. An accurate estimation of credit risk could be transformed into a more efficient use of economic capital. In this study, the presenter tried to use a triple-phase neural network ensemble technique to design a credit risk evaluation system to discriminate good creditors from bad ones. In this model, many diverse neural network models are first created. Then a correlation maximization

algorithm is used to select the appropriate ensemble members. Finally, a reliability-based method is used for neural network ensemble. For further illustration, a publicly credit dataset is used to test the effectiveness of the proposed neural ensemble model.

Guimo´n (2005) presented a case study report on the issue of credit risk analysis. The aim of the paper was to increase readers understanding of the role of intangibles in credit risk analysis and of the main factors which enable or disable the impact of intellectual capital (IC) reports. This literature review is complemented with two case studies. The first presents the results of an experimental workshop with 12 credit risk analysts from Banco Santander Central Hispano, a major Spanish bank (Saunders, 1996).

The second case study looks at how the European Investment Bank integrates intangibles into its project appraisal process. The findings Provides a comprehensive conceptual framework to analyze the impact of IC reporting in credit risk analysis. The lecturer however argues that there is a significant gap between the perceived potential impact of IC reports and their real impact in practice, and proposes a classification of the barriers in the market for corporate information that help explain this apparent paradox. The case studies presented illustrate some of the factors that enable or disable the impact of IC reporting in practice (Karaa & Krichène, 2012).

Njanike (2009) presented an article on the topic related to effective management of credit risk.The study seeks to evaluate the extent to which failure to effectively manage credit risk led to Zimbabwe's banks' demise in 2003/2004 bank crisis. It also seeks to establish other factors that led to the banking crisis and to outline the components of an effective credit risk management system. The study found that the failure to effectively manage credit risk contributed to a greater extent to the banking crisis. The research also identified poor corporate governance, inadequate risk management systems, ill planned expansion drives, chronic liquidity challenges, foreign currency shortages and diversion from core business to speculative non-banking activities as other factors that caused the crisis. There is also need for banks to develop and implement credit scoring and assessment methodologies, review and update the insider lending policies and adopt prudential corporate governance practices (Lee & Chen, 2005).

Abdelmoula (2015) presented idea about credit risk management and credit risk analysis .Credit risk is defined as the risk that borrowers will fail to pay its loan obligations. In recent years, a large number of banks have developed sophisticated systems and models to help bankers in quantifying, aggregating and managing risk. The outputs of these models also play increasingly important roles in banks' risk management and performance measurement processes. In this study the research try to tackle the question of default prediction of short-term loans for a Tunisian commercial bank. The research used a database of 924 credit records of Tunisian firms granted by a Tunisian commercial bank from 2003 to 2006. The K-Nearest Neighbor classifier algorithm was conducted and the results indicate that the best information set is relating to accrual and cash-flow and the good classification rate is in order of 88.63 % (for k=3). A curve ROC is plotted to assess the performance of the model. The result shows that the AUC (Area under Curve) criterion is in order of 87.4% (for the first model), 95% (third model) and 95.6% for the best model with cash flow information.

Strutt (1993) outlines an engineering approach which defines risk analysis in the same terms as the Royal Society Study Group defines risk estimation and indeed claims that risk analysis is also called risk estimation. This is a narrower definition which now suggests that the preliminary conclusion above is mistaken. However, in another paper (Strutt, 1993), the same author expands his definition of risk analysis to include evaluation of acceptance or tolerance to the risk.

Strutt (1993) gives the fullest definition of risk analysis in a third paper where he sets out the concept in seven stages as systematic assessment (item by item - question every part of the system), identification of risks (local and global scale), assessment of risks (frequencies and consequences). This may involve a number of different analyses like establishing acceptable or tolerable levels of risk, evaluation of risks, determine whether the risks are as low as reasonably practicable, and determine risk reduction measures where appropriate. Risk analysis now goes beyond evaluation to include some of the decision making processes of risk management. Brainstorming is the main intuitive technique, involving a group generating ideas off the top of their heads with a philosophy of nobody is wrong - let's get the ideas on the board. Although quick and simple, it lacks the comprehensive approaches of the more sophisticated techniques

In some cases, the failure to perform adequate due diligence and financial analysis and to monitor the borrower can result in a breakdown of controls to detect credit-related challenges. For example, banks experiencing fraud-related losses have neglected to inspect collateral, such as goods in a warehouse or on a showroom floor, have not authenticated or valued financial assets presented as collateral, or have not required audited financial statements and carefully analyzed them. An effective credit review department and independent collateral appraisals are important protective measures, especially to ensure that credit officers and other insiders are not colluding with borrowers (Njoku, 1997) In addition to shortcomings in due diligence and credit analysis, bank credit problems reflect other recurring problems in credit-granting decisions. Some banks analyze credits and decide on appropriate non-price credit terms, but do not use risk-sensitive pricing. Banks that lack a sound pricing methodology and the discipline to follow consistently such a methodology will tend to attract a disproportionate share of underpriced risks. These banks will be increasingly disadvantaged relative to banks that have superior pricing skills.

It was also noted from Basel's research that some credit problems arise from subjective decision making by senior management of the bank. This includes extending credits to companies they own or with which they are affiliated, to personal friends, to persons with a reputation for financial acumen or to meet a personal agenda, such as cultivating special relationships with celebrities (Nikhade et al, 2004). Many banks that experienced asset quality problems in the 1990s lacked an effective credit review process (and indeed, many banks had no credit review function). Credit review at larger banks usually is a department made up of analysts, independent of the lending officers, who make an independent assessment of the quality of a credit or a credit relationship based on documentation such as financial statements, credit analysis provided by the account officer and collateral appraisals. At smaller banks, this function may be more limited and performed by internal or external auditors (WOCCU, 2011). The purpose of credit review is to provide appropriate checks and balances to ensure that credits are made in accordance with bank policy and to provide an independent judgment of asset quality, uninfluenced by relationships with the borrower. Effective credit review not only helps to detect poorly underwritten credits, it also helps prevent weak credits from being granted, since credit officers are likely to be more diligent if they know their work will be subject to review. A common and very important problem among troubled banks

in the early 1990s was their failure to monitor borrowers or collateral values. Many banks neglected to obtain periodic financial information from borrowers or real estate appraisals in order to evaluate the quality of loans on their books and the adequacy of collateral. As a result, many banks failed to recognize early signs that asset quality was deteriorating and missed opportunities to work with borrowers to stem their financial deterioration and to protect the bank's position. This lack of monitoring led to a costly process by senior management to determine the dimension and severity of the problem loans and resulted in large losses.

Relationship of Credit risk assessment with credit risk management

Balina (2017) presented idea of Assessing individual credit risk on the basis of discriminant analysis by Poland's cooperative banks. The main objective of the study was to determine the potential of Poland's cooperative banks utilizing discriminant analysis to assess individual credit capability. In the construction of the scoring model, data from retail co-op bank clientele was used. The chosen banks operated in rural areas and their clients were granted loans during the years 2010–2014. The realized study considered the possibility of applying discriminant analysis to restrict a co-op bank's individual credit risk exposure. From among 28 explanatory variables describing a bank's clients who were applying for loans, five variables were found to be effective in the model: applicant's age, applicant's higher education, current loan obligations, applicant's default on loan payment, and maximum number of days an applicant was late in due payment. These variables, connected with assessing regressive coefficients returned a highly effective credit risk indicator identifying potentially insolvent clients (Ahmed & Malik, 2015) .

Bagheri and Kashani (2019) presented the idea of evaluating the credit risk. In this research, the effect of each of the factors involved in determining the risk of credit in cooperative has been tested first. Then, using the self-organizing mapping algorithm, the researcher clustered the data to exclude clusters that are very remote and far-reaching. The credit risk of each of the cooperatives has been calculated through the algorithm of the multi-layer perceptron neural networks in MATLAB software and a model for predicting credit risk in the future. The main purpose of this research was to use this algorithm to classify cooperatives by calculating credit risk numbers and use it to predict the future credit risk of the future cooperatives.

Anam et. al (2012) examined liquidity risk management practices of Islamic banks of Brunei Darussalam using from two perspectives. The first part covered the issue related to understanding risk and risk management, risk assessment and analysis, risk identification, risk monitoring, credit risk analysis and risk management practices. While, the second part covered the methods of risk identification in addition to risks faced by the Islamic banks. The Study revealed that, there are three significant types of risks that face the Islamic banks in Brunei Darussalam. The first type of risk is foreign exchange risk and the second type is credit risk and finally the operation risk. Concerning the most important methods used in risk identification of Islamic bankers, the results revealed that, Inspection by Sharia's supervisors, executive and supervisory staff; audit and physical inspection; financial statement analysis; and. risk survey are the most significant factors of risk identification. The study also revealed that, Islamic banks in Brunei Darussalam are reasonably efficient in risk assessing and analysis, risk management, risk identification (Galindo & Tamayo, 2000).

Jalili (2010) examined the subject of research in an article titled "credit assessment system for bank and insurance customers: the experience of Iranian Credit Scoring Consultation Company". In this article, the activities and achievements of the company have been presented as successive samples of credit assessment system and the stand of new technologies for credit assessment of bank and insurance customers and its scientific and technical aspects including data exchange, storage, processing, reporting, network security procurement, and data transmission routes and the exchange format of the mentioned system have been considered and debated.

Elahi and Ghodsolahi-Naji (2014) Began to present a combined system for credit risk assessment in which collective learning is used for decision making on the subject of granting credit to facilities applicant individual. The results showed that this system makes a higher accuracy, better operation and less expense in classifying credit applicants in proportion to other similar methods.

Relationship of credit risk monitoring with credit risk management

The main function of the risk manager is to monitor; measure and control credit risk. The Risk Manager's duty includes identification of possible events or future changes that could have a negative impact on the institution's credit portfolio and the bank's

ability to withstand the changes. The areas to examine critically are: Economical or industry changes, Market – risk events and Liquidity conditions.

According to Parrenas (2005) the shareholders of the institutions can use their rights to demand information in order to judge the efficiency of the risk management system. The director's report enables the shareholders to assess the status of the corporation knowledgeably and thoroughly. Khan and H Ahmed (2001) Conducted a survey of risk management practices and found that on average the lowest percentage is on the measuring, mitigating and monitoring risk that is 69% score as compared to risk management policies and procedures that is 82.4%, and internal control of banks that is 76% (Chen & Cheng, 2013).

Anthony, Caroline and Kipyegon (2016) made evaluation of impact of credit management practices (CRM) on the performance of Savings and Credit Cooperative Societies (Saccos). The study was conducted from 41 respondents who were the employees in the11 Savings and Credit Cooperative Societies (Saccos) from Eldoret town in Kenya. The Savings and Credit Cooperative Societies (Saccos) were found to be highly considerate with regard to identify the interest risk rate and processes in credit risk management to a large extent. The moderate extent of involvement of Savings and Credit Cooperative Societies (Saccos) was found in consideration of exchange rate risk. Moreover, higher level of credit risk analysis and management was also found in the Savings and Credit Cooperative Societies (Saccos). The study stressed that adequate tools like risk monitoring and risk reporting must be found by SAVING AND CREDIT COOPERATIVES to mitigate the loss from the credit risks. (Raad, 2015).

According to Baldoni (1998) the area of interest rate risk is the second area of major concern and ongoing risk monitoring and management. Here, however, the tradition has been for the banking industry to diverge somewhat from other parts of the financial sector in their treatment of interest rate risk. Most commercial banks make a clear distinction between their trading activity and their balance sheet interest rate exposure. Investment banks generally have viewed interest rate risk as a classic part of market risk, and have developed elaborate trading risk management systems to measure and monitor exposure (Varalakshmi & Deepika, 2016) .

Alshatti (2015) evaluated the impact of credit risk management technique on the financial efficacy of the commercial banks. The data was collected from the annual reports of commercial banks in Jordan from 2005 to 2013. The study found that leveraging ratio negatively correlated with the profitability of the banks. Capital adequacy ratio and credit interest facilities were not found to influence the profitability of the banks. Hence, banks must revise and devise appropriate strategies to develop the competences among the banks. The various indicators of non-performing assets should be taken into account by the banks through appropriate monitoring and controls over the credit risks (Ruchi, 2017).

Santomero (1997) conducted an analysis of the commercial bank risk management Process and noted that throughout the past years, on-site visits to financial service firms were conducted to review and evaluate their financial risk management systems. The commercial banking analysis covered a number of North American super-regionals and quasi-money center institutions as well as several firms outside the U.S. The information obtained covered both the philosophy and practice of financial risk management. This paper outlines the results of this investigation. It reports the state of risk management techniques in the industry. It reports the standard of practice and evaluates how and why it is conducted in the particular way chosen. In addition, critiques are offered where appropriate. He also noted that common risk avoidance practices here include at least three types of actions. The standardization of process, contracts and procedures to prevent inefficient or incorrect financial decisions is the first of these. The construction of portfolios that benefit from diversification across borrowers and that reduce the effects of any one loss experience is another. Finally, the implementation of incentive compatible contracts with the institution's management to require that employees be held accountable is the third. In each the goal is to rid the firm of risks that are not essential to the financial service provided, or to absorb only an optimal quantity of a particular kind of risk

Magali J. (2013) in his study on the impacts of credits risk management on profitability of rural Savings and Credits Cooperative Societies a case study of Tanzania recommended that rural Savings and Credits Cooperative Societies should be keen in credits' processing, monitoring and follow-up. Moreover, they should screen borrowers before issuing loans by using the credit policy and carrying out a feasibility study on

the client and they should also issue loans only to qualified borrowers. Considering risks variables and diversity of income of borrowers also is vital for dealing with default risks Mustafa, M . Al-Sayed, and Miller (2011) Found that credit risk control assists in decreasing loan default levels and may aid in improving organization financial performance.

Conclusion of literature Review

The above brief literary work provides simple relation to the idea that credit risk is associated with loan portfolio management, credit risk identification, credit risk assessment and analysis, and credit risk monitoring. All these activities facilitate the process of risk management procedure which when efficiently applied is useful in credit risk management.

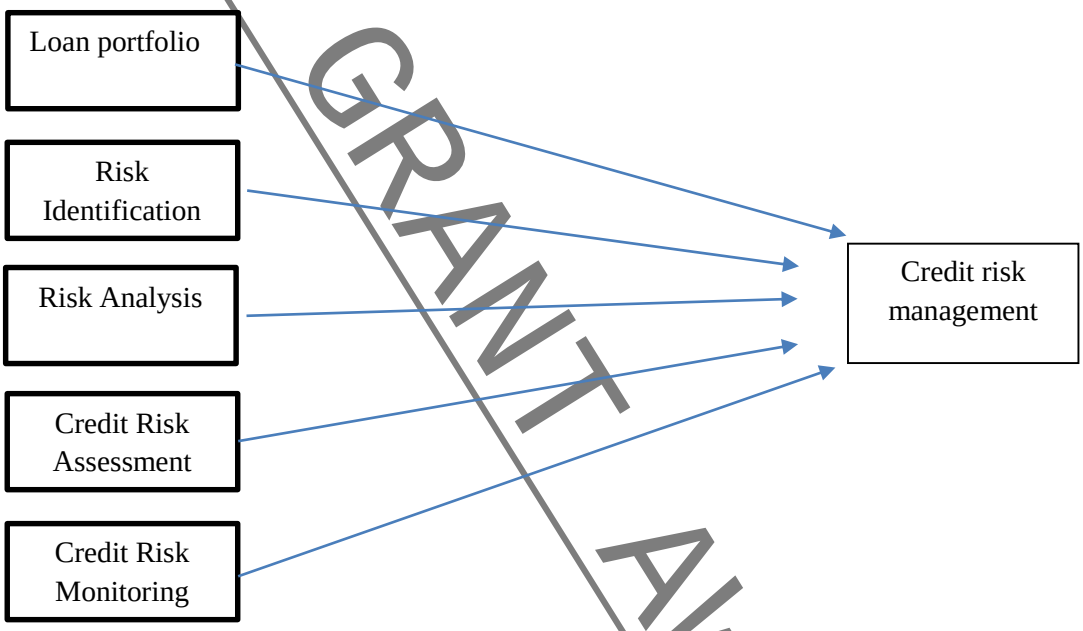
2.3 Research Gap

While initiatives on credit risk management have been increasingly conducted by financial institutions like banks and insurance firms, this is hardly practiced in Saving and credit Cooperatives, and the result of this has massively impacted their efficiency (Gauld, 2016) With increased competition credit advancement to low income earners with a high default rate, Saving and credit Cooperatives experience increased credit risk level for which if no efforts are put to adopt effective credit risk initiatives to minimize the risk, the efficiency of these institutions will be called into question . So specific concerns must be placed in organizations effort and skills of employees to manage the credit risk in the organization.

Research have not still addressed the aspect of credit risk management techniques used in financial institutions. There have been even more less research conducted in the area or credit risk management in unauthorized and unregulated sector. Nepali researchers have still yet to address the credit risk management procedure in cooperative organization. This is also because of unavailability of unorganized and properly regulated datas in cooperative .Any research done in the sector is mostly related to secondary data and not primary. This is the major gap of the research attempted to be fulfilled by this research.

2.4 Research Framework and Definition of Variables

On the basis of these information and studies we can know that their number of dependent and independent variable involved in the determination level and status of credit risk management in Nepalese cooperative. However, of these various independent and dependent variables we take in consideration only few or major ones due to lack of time and resources to analyze each and every one of them. Here, research will be conducted on the periphery of cooperative in Kathmandu valley



The following relationship of independent variables with dependent variable is formed:

CRM = f (LP, RI, RA, CRA, CM)

Where,

CRM = Credit Risk Management,

Credit risk management forms a key part of a company's overall risk management strategy. Weak credit risk management is a primary course of many business failures.

Many small businesses, for example, have neither the resources nor the expertise to operate a sound credit management system

L P M= Loan Portfolio Management

Loan Portfolio Management constitutes loans that have been made or bought and are being held for repayment under different heading and categories. It presents idea about different sectors and sections loan are imparted through to ensure diversification of credit. The value of a loan portfolio depends not only on the interest rates earned on the loans, but also on the quality or likelihood that interest and principal will be paid. Loan portfolio management (LPM) is the process by which risks that are inherent in the credit process are managed and controlled.

C R I = Credit Risk Identification,

Credit Risk identification is a process that reveals and determines the possible organizational risks as well as conditions, arising risks. By Credit risk identification the organization is able to study activities and places where its resources are exposed to risk. Credit Risk identification is the first stage of risk management. It develops the basis for the next steps: analysis and control of risk management. Correct Credit risk identification ensures risk management effectiveness. If risk managers do not succeed in identifying all possible losses or gains that challenge the organization, then these non-identified risks will become non-manageable

C R A =Credit Risk Analysis

Credit Risk analysis is the analysis of the anticipated cost that will be incurred if a contingency takes place. This analysis is done before any contingency occurs. The institution's credit policy should define the various risk grades of its rating system. It should also set the criteria for assigning risk grades and the circumstances under which deviations from criteria are permitted. The credit policy should also define the roles of different parties involved in the rating process

C R A= Credit risk Assessment

These constitute the process that a financial institution uses to determine the credit worthiness of a borrower. An institution should conduct comprehensive assessments of

the creditworthiness of its obligors. These should include, where pertinent, analysis of the obligor's financial position as reflected in various financial and cash how statements, past repayment record, management quality and integrity, as well as relevant industry and macroeconomic data

R M = Credit Risk Monitoring

Key indicators of credit condition should be specified and monitored to identity and report potential problem credits. These would include indicators from the following areas: Financial Position and Business Conditions; Conduct of Accounts. Loan Covenants; External Rating and Market Price. In addition to monitoring the above risk indicators, an institution should also monitor the use of funds to determine whether credit facilities are drawn down for their intended purposes

CRM = Credit risk management procedure

These are procedures followed by an organization in order to implement its credit policy. An institution should establish appropriate procedures and processes, 'these should be documented and set out in sufficient detail to provide operational guidance to staff. Procedures should be established for the implementation of various controls and check within the credit process, such as completion of credit and legal documents, verification of loan disbursement, implementation of facility limits and follow up on credit exceptions. The operational procedures should be periodically reviewed and updated to take into account new activities and products, as well as new lending approaches and changes in systems

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

Research methodology is designed to explain the research methods used to meet the stated objectives of the study. It explores the research process regarding the level of credit risk management in the Nepalese cooperative. This chapter hence provides information about research design, sources of data collection, instrument used, data collection procedures, pilot study, population and sampling, instrumentation, administration of instrument and data analysis plan. The primary objective of this chapter was to highlight the methods and procedure utilized to get the most accurate result following the set objective of the research and testing the hypothesis. The design and methods has been applied according to the research type that is descriptive and casual research design.

3.2 Research Plan and Design

This study has employed descriptive and casual research design to deal with the fact-finding and searching adequate information associated with understanding the credit risk management in cooperative organization of Nepal. Here, the study tries to relate the if and to what extent cooperative use loan portfolio management , risk identification, risk analysis credit risk assessment and credit risk monitoring to regulate and manage the credit risk in the cooperative in Nepal .

3.3 Sample Description

3.3.1 Population

The population for this study was professional people of Nepal who are involved cooperative organization in Nepal. In order to carry out this research, convenience sampling method is used

3.3.2 Sample Size

Current data revel that the estimated cooperative in Nepal is about 30000. If we take in consideration of cooperative in Kathmandu alone, there are about 1856 cooperative in here (Maharjan, 2020). If we take in consideration of the population the sample size we would require to justify the population is

Sample (n) = $\frac{z^2 pq}{e^2}$

Where

z is the value obtained from normal distribution table at 5% level of significance or 95% confidence level

p is the proportion descried by previous research (since no such research has been found in context of Nepal , we take the standard value of 0.5 or 50%)

q is the value remaining after p = 1-p

e is the error limit, here we take standard value of 0.05

Sample (n) = $\frac{1.96^2 x\ 0.5\ x\ 0.5}{0.05^2}$

= 384

Again sample size from population =

$$\frac{384}{1 + \frac{384}{30000}}$$

= 379

As per other rule, the standard sample size is expected to be 10% of the population. Here since most research will be in around Kathmandu where there are about 1856 cooperative it is suitable to take sample size of 10% of 1856 = 186 sample.

However during this period of covid pandemic and smart lockdown it is not possible to visit all 186 sample cooperatives. So the study is conducted taking consideration of

only about 150 cooperative organization management teams in Kathmandu valley. A formal questioner would be presented to the organization regarding their views on statement of the variables mentioned in the study.

3.4 Nature and Source of Data Collection

This research is based on the primary survey. The data was collected by formulating a set of questionnaires, which was then distributed and collected from existing cooperative in Kathmandu valley. However, in some of the cooperatives due to inadequate ideas about the inability to understand all the question properly, assistance was provided to explain and input the response. Lastly, due to the pandemic and lockdown, questioner were also administered through telephone calls and the response were inputted accordingly. The findings were completely based on the data and facts provided by the sampled respondents.

The primary source of data was collected from well-structured questionnaire, which was the key instrument to collect data for this research.

For primary data collection, self-administered questionnaire was used after analyzing series of literature pertaining to credit risk management. A 6-Point Likert scale was used. Value of 1 means Strongly Disagree, 2 for Disagree, 3 for Neutral 4 for Agree and 5 for strongly agree. The respondents were provided instruction on the questionnaire itself. Close end and specific questionnaire were used in this study to empirically test the hypothesis. The questionnaire comprised of three major parts. Copy of questionnaire is provided on Appendix A.

Questionnaire was provided to the respondents that included respondents profile, demographic information as well as personality traits and career success. Questionnaire consists of two sections i.e. independent variables and dependent variable.

First section consists of Age of organization and of Respondent, gender of respondent, year of work experience, academic qualification etc. Second section consist the set of constructs for independent variables and final section consists the set of constructs for dependent variables in six- point Likert scale to meet the necessities and objectives of the study. MS-Excel was used to arrange the data and SPSS software was used for the analysis part.

The secondary data collection was used from various books, articles, research papers and websites were used. The constructs for independent variable is used from the book of different scholars and some were taken from google in order to make all those simpler and easily understandable. The constructs for dependent variable is constructed by researcher himself and some assistance has been taken from previous thesis.

3.5 Data Collection Procedures and Time Frame

Based on the review of the literature, a comprehensive set of questionnaire was developed which included different constructs related to personality traits and career success. So, in this research, two methodologies were used for data collection procedure.

- **Primary Data**

  Primary data were collected through direct questionnaire survey. The questionnaire was distributed through prints as well as through Gmail. All 204 responses were received with complete information.

- **Secondary Data**

  Secondary information was collected through online journal articles to find out literature regarding personality traits, conceptual as well as theoretical framework and career success. Similar thesis and dissertations were analyzed and relevant information was used for literature review.

3.6 **Pilot Test**

Pilot testing was conducted on 20 data obtained from convenience-sampling method in order to identify the reliability and validity of the constructs used for the overall research purpose. Reliability was further checked on the sample study once the sample collection was considered adequate

3.6.1 Reliability

S.N	CODING	Variables	N	Cronbach's Alpha (pilot Sample)	Cronbach's Alpha (sample)
1	L P	Loan Portfolio	6	0.738	0.715
2	R I	Risk Identification	7	0.789	0.778
3	R A	Risk Analysis	6	0.758	0.774
4	R S	Credit risk Assessment	5	0.770	0.748
5	RM	Credit Risk Monitoring	6	0.719	0.687
6	CRM	Credit Risk Management,	6	0.812	0.761
		Overall reliability	6	0.929	0.928

Table 3.1 Reliability Test

The table 3.1 shows the reliability statistics on independent variable of Loan portfolio, Credit Risk identification, Credit Risk analysis, Credit risk Assessment, credit risk monitoring and on dependent variable of Credit Risk Management in cooperative organization in Nepal. Cronbach's alfa of 0.929 and 0.928 is obtained as reliability scale value for pilot and sample study which indicates very strong overall reliability. There are 6 items for the scale used in the reliability scale in both pilot and sample test.

Similarly, individual cronbatch alpha of 0.738, 0.789, 0.758, 0.770, 0.719 and 0.812 is shown on the table for each variable of Loan Portfolio, Credit risk identification, Credit Risk analysis, Credit risk Assessment, credit risk monitoring and on dependent variable of Credit Risk Management in cooperative organization in Nepal .this indicated proper reliability for the scale used. There were 6, 7 6, 5, 6, 6 items for the each or variables respectively. According to the scale test, the study scale above 0.70 is considered as reliable and proper. In that sense reliability scale test of the sample indicate that the sample variables are reliable and it is even stronger in case of overall reliability of the sample.

Later this very study's descriptive forms reliability was checked again on full sample. As per the samples study the cronbatch alpha level was 0.715 on Loan portfolio, 0.778 on Credit risk Identification ,0.774 on Credit Risk Analysis, 0.748 on Credit risk Assessment ,0.687 on Credit risk Monitoring and finally 0.761 on Credit Risk Management

The reason for this fall of slight fall of reliability cronbatch alpha level might be the independence of respondent representative in filling the questioner. Unlike the pilot samples distribution and collection personally, the sample studies 10-15 questioners were never collected back. More over the situation due to lockdown and changing working hours to fight the pandemic also might have affected the reliability index of the sample than that of the pilot Study.

3.7 Method of Analysis

The study is based on various statistical test and analysis. For this purpose, Statistical Package for Social Science (SPSS) software and Microsoft Excel was used to analyze and interpret the Quantitative data. Descriptive statistics was used for the calculation of mean, median and standard deviation based on the respondent profile. Correlation analysis, regression analysis and hypothesis testing was carried out in the process of this research. The findings, interpretation and analysis have been presented through different table and charts when necessary. The reliability of scales was analyzed by using Cronbach's alpha test which is the best measure for multiple scale items this is also the most popular test for the inter-item consistency reliability.

Thus, the following model equation is designed to test the hypothesis. From the conceptual framework the function of dependent variables (i.e. Credit risk management) takes the following form:

CRM = f (LP, RI, RA, RS, RM)

More specifically, the given model has been segmented into the following models:

Model 1:

The study applied the following regression model:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \mu$

Y= CRM = Credit Risk Management,

B_1 = L P = Loan Portfolio

B_2 = R I = Risk Identification,

B_3 = R A = Risk Analysis

B_4 =R S= Credit risk Assessment

B_5= R M = Credit Risk Monitoring

CHAPTER IV

RESULTS AND DISCUSSION

The analysis and discussion involve the description of the responses using the T-test, ANOVA, Descriptive statistics, correlation, regression, AMOS, Frequency tables, cross tabulation.

4.1 Demographic Statistics

4.1.1 Age of the Organization

The respondents were before answering the actual study question were asked about the age of their organization. Table 4.1.1 shows the age wise category of the organization. Among the total 147 organization sampled 7 organization were less than 1 years old, of the remaining 37 organization were told to be 5-0 years old and lastly 103 organization were said to be more than 10 years old, the result obtained are as follows.

Table 4.1. 1 Demographic analysis of Age of the Organization

	Particular	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1 year	7	4.8	4.8	4.8
	5- 10 years	37	25.2	25.2	29.9
	more than 10 years	103	70.1	70.1	100.0
	Total	147	100.0	100.0	

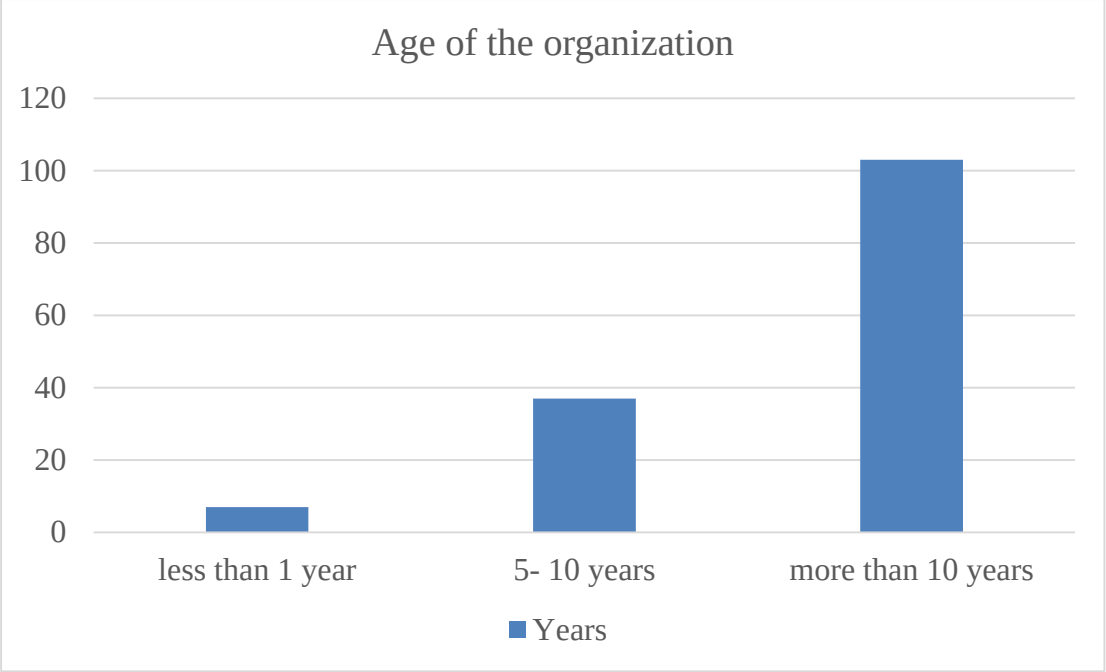


Figure 4.1. 1 Figure to show Age of the Organization

Of the 147 sampled, highest number of organization revealed the age of their organization to be more than 10 years. It composes of about 70.1% of total respondents. This is followed by 37 organization from the age group of 5-10 years constituting of about 25.2% of the total respondents. Lastly, the age class of less than 1 year has the representation of 7 organization compositing of only 4.8%. This very idea is presented in the chart.

4.1.2 Gender of Respondents

The respondents were before answering the actual study question were asked about their gender. Table 4.1.2 shows the gender wise category of respondents. Among the total 147 respondents 107 were male, which represent 72% of total sample size. This implies higher number of male candidates in the credit and operation section of the cooperative. There were about 40 female representatives in the sample, the result obtained are as follows.

Table 4.1. 2 Demographic analysis of gender of the Respondents

Gender		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	87	59.18	59.18	59.18
	Female	60	40.81	40.81	100.0
	Total	147	100.0	100.0	

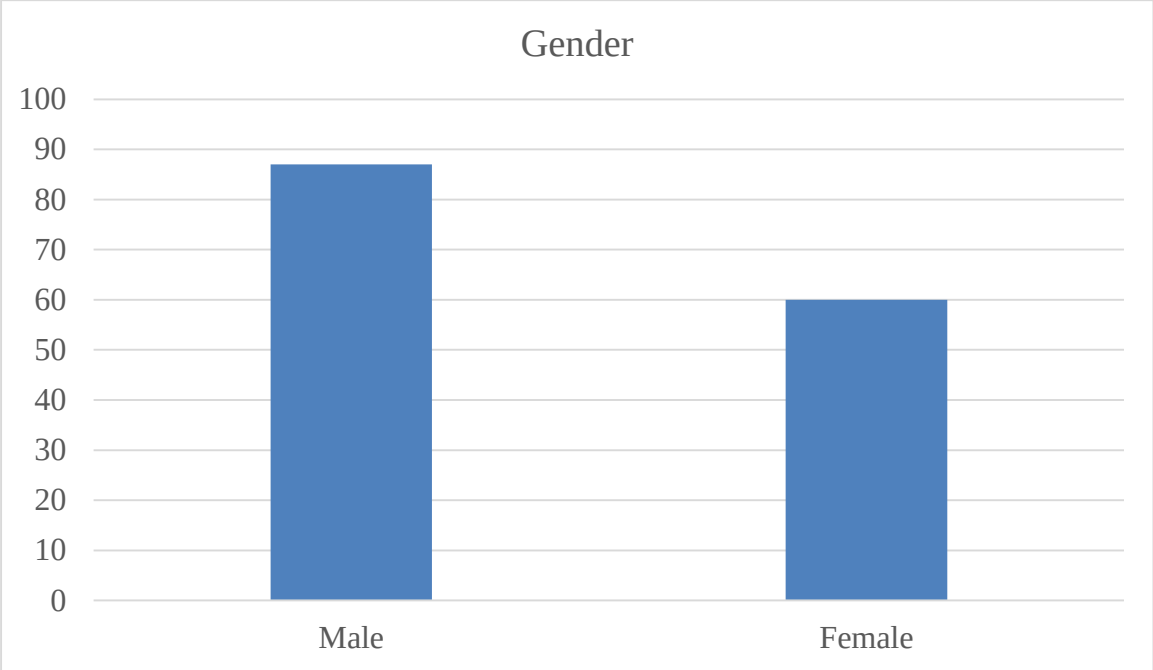


Figure 4.1. 2 Figure to show Demographic analysis of Gender of the Respondents

Of the 147 responses received there were 87 male respondents and 60 female respondents. This constitutes of 59.18% male and 40.81% female respondents. We can easily relate to the idea that cooperative provides almost equal opportunities to people irrespective of gender.

4.1.3 Age of the Respondents

The respondents before answering the actual study question were asked about their age. The statement of the question was Please state your age and of the 147 responses received, there were least people from the age group of 20-25 and majority from the

age group of more than 40 years. This was followed by age group of 30-35 and 35-40. The results obtained are as follows.

Table 4.1. 3 Demographic analysis of the age of the Respondents

	Years	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-25 years	11	7.5	7.5	7.5
	25-30 years	21	14.3	14.3	21.8
	30 - 35 years	33	22.4	22.4	44.2
	35 - 40 years	23	15.6	15.6	59.9
	40 years and above	59	40.1	40.1	100.0
	Total	147	100.0	100.0	

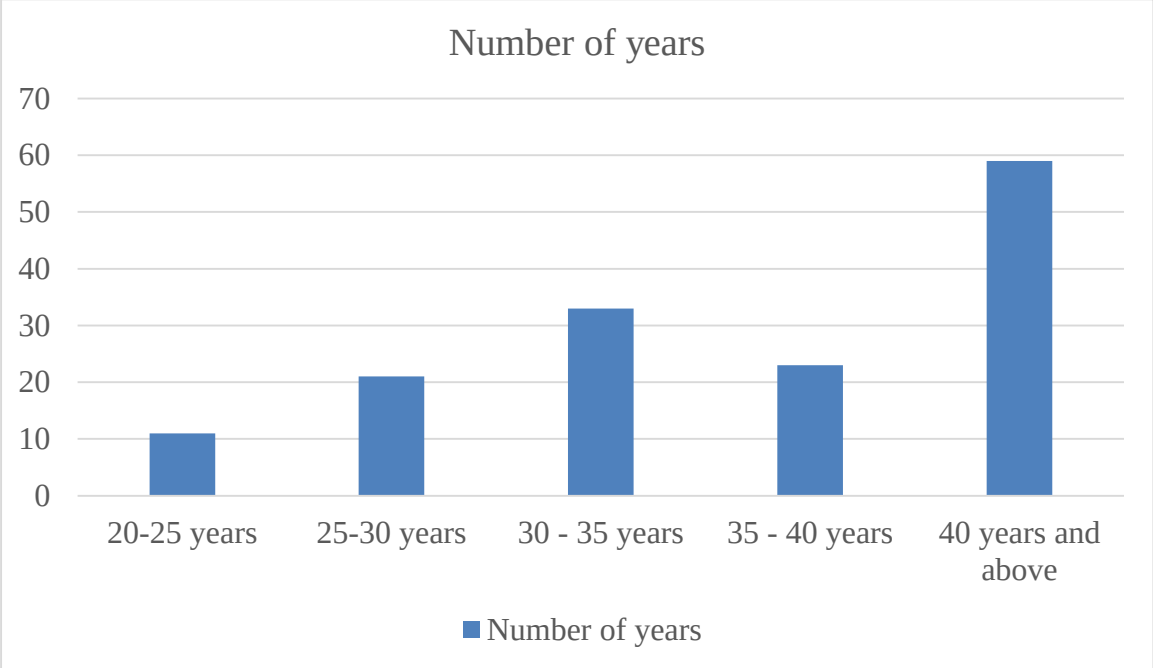


Figure 4.1. 3 Figure to show Demographic analysis of the age of the Respondents

Of 147 respondents for the survey, it was found that maximum of the respondents were from the age group of 40 years and above. It comprises of about 59 individuals representing 40.1% of the total respondents. The data shows that the highest bar was for the age group of 30-35 and for 35-40 after 40 years and above age group. This comprises of 22.4% respondents in the second highest age group and 15.6% respondents in the third highest age group class.

4.1.4 Qualification of the Respondents

The respondents before answering the actual study question were asked about their educational qualification. The statement of the question was to please state detail about your educational qualification. Of the responses received; the results obtained are as follows.

Table 4.1. 4 Demographic analysis of Qualification of the Respondents

	Qualification	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	+2	15	10.2	10.2	10.2
	Bachelors	65	44.2	44.2	54.4
	Masters	67	45.6	45.6	100.0
	Total	147	100.0	100.0	

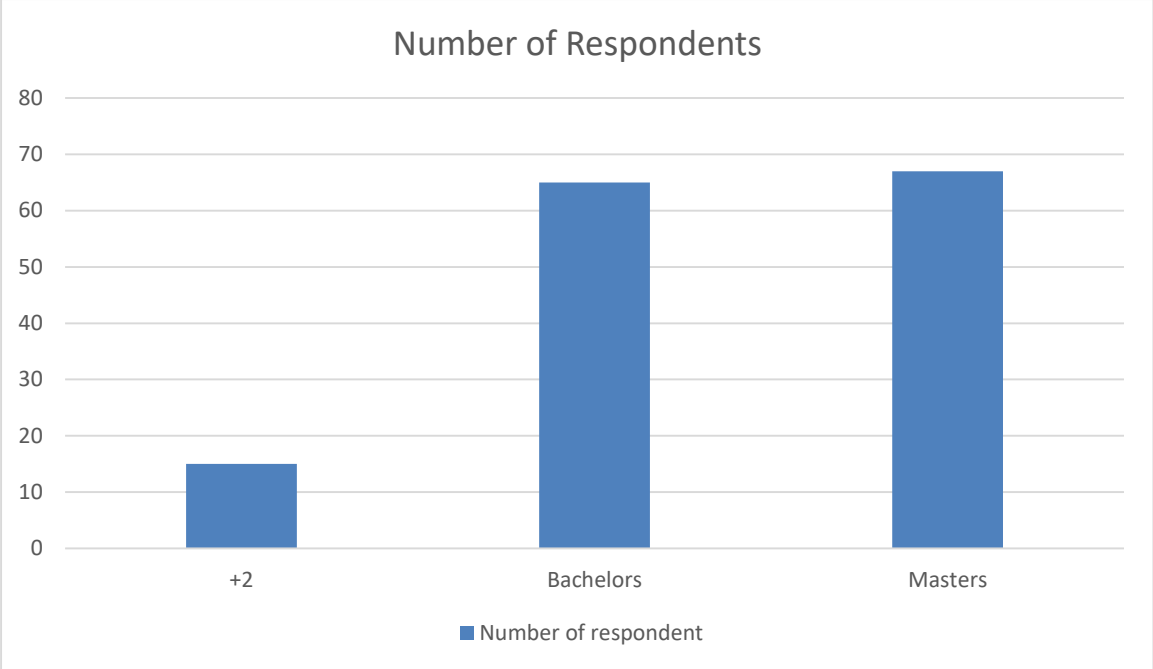


Figure 4.1. 4 Figure to show Demographic analysis of Qualification of the Respondents

Of the total sample it was found that maximum of the respondents replied that they had educational qualification of Master's Degree. The total number of people said to have master's degree is 67 which represents 45.6% of the total sample. Similarly, the number of people having Bachelor's degree is 65 which is 44.2% of the total respondent. Lastly, total number of people having +2 level of educational qualification is 15 comprising of 10.2% of total respondents.

4.1.5 Designation of the Respondents

The respondents before answering the actual study question were asked about their Designation. The statement of the question was to please state detail of your designation. Of the responses received; the results obtained are as follows.

Table 4.1. 5 Demographic analysis of Designation of the Respondents

	Position	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Credit Manager	61	41.5	42.4	42.4
	Branch Manager	19	12.9	13.2	55.6
	Managing Director	31	21.1	21.5	77.1
	other	33	22.4	22.9	100.0
	Total	144	98.0	100.0	
Missing	System	3	2.0		
	Total	147	100.0		

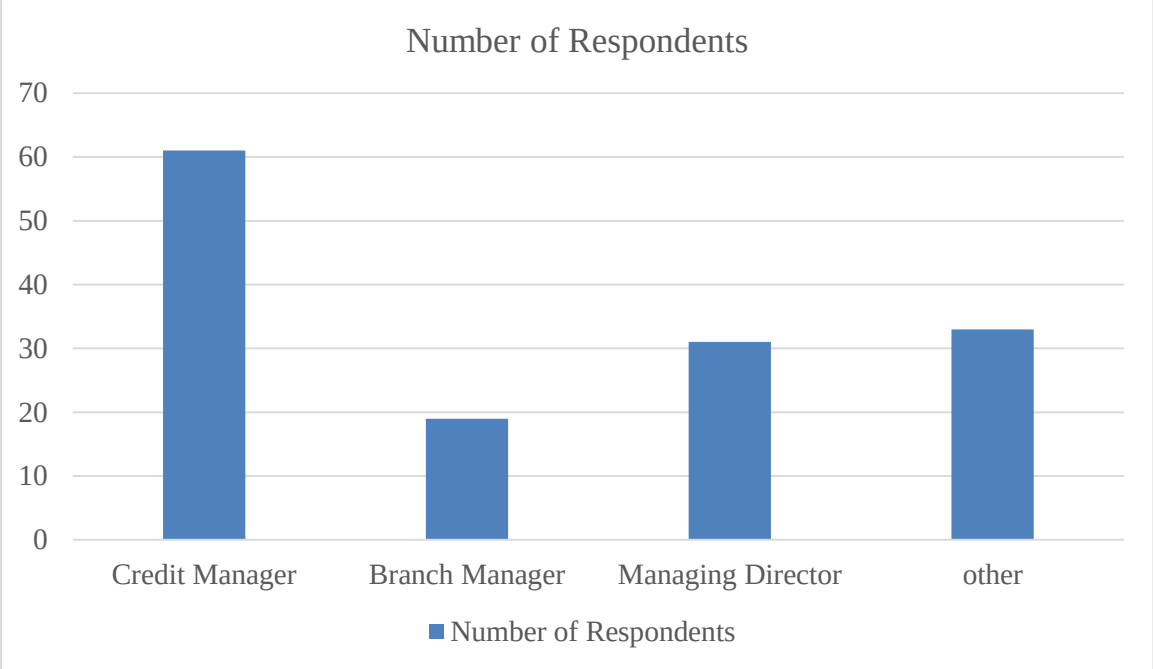


Figure 4.1. 5 Figure to show Demographic analysis of Designation of the Respondents

Of the total respondents of 147 individual it was found that there were maximum people who responded their designation to be credit managers. It comprises of about 41.5% of the total respondents. Following that there were respondents holding position of secretary, receptionist, cashier, accountant) etc in others category. It comprised of 22.4% of the total respondent. Similarly, there were respondent replied there designation to be branch in charge and there were few Extreme executives of the organization comprising of 19 and 31% of the respondents.

4.1.6 Experience of the Respondents

The respondents before answering the actual study question were asked about their experience in the organization. The statement of the question was to please state detail of years of experience you have in the organization. Of the responses received; the results obtained are as follows.

Table 4.1. 6 Demographic analysis of Experience of the Respondents

	Years	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 1 years	14	9.5	9.5	9.5
	1-2 years	21	14.3	14.3	23.8
	2 - 5 years	34	23.1	23.1	46.9
	more than 5 years	78	53.1	53.1	100.0
	Total	147	100.0	100.0	

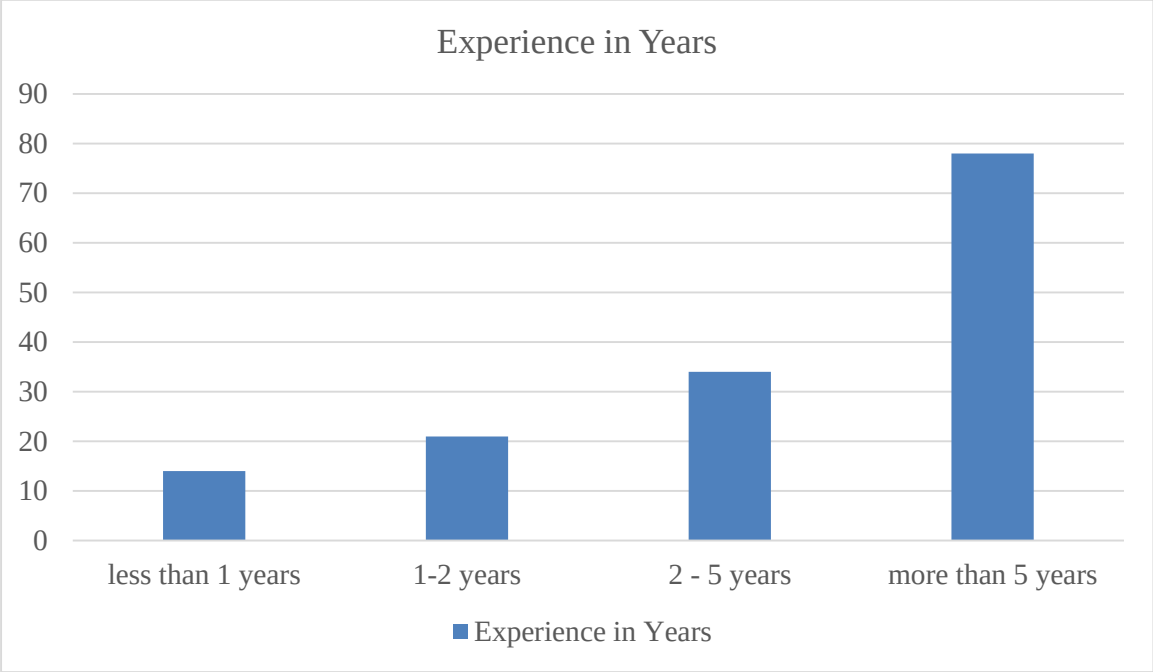


Figure 4.1. 6 Figure to show Demographic analysis of Experience of the Respondents

Of 147 Respondents maximum people have more than 5 years of experience. It comprises of about 53.1% of the total respondent. This is followed by age category of respondents of 2-5 years, 1-2 years and finally less than 1 year with composition of 23.1%, 14.3% and 9.5%. This very information is presented in the data chart.

4.1.7 Type of Cooperatives

The respondents before answering the actual study question were asked about the type of cooperative it is. The statement of the question was to please state which category of cooperative the organization is. Of the responses received; the results obtained are as follows.

Table 4.1. 7 Demographic analysis of Type of the respondents

	Type	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	saving and credit	109	74.1	74.1	74.1
	multi-purpose cooperative	38	25.9	25.9	100.0
	Total	147	100.0	100.0	

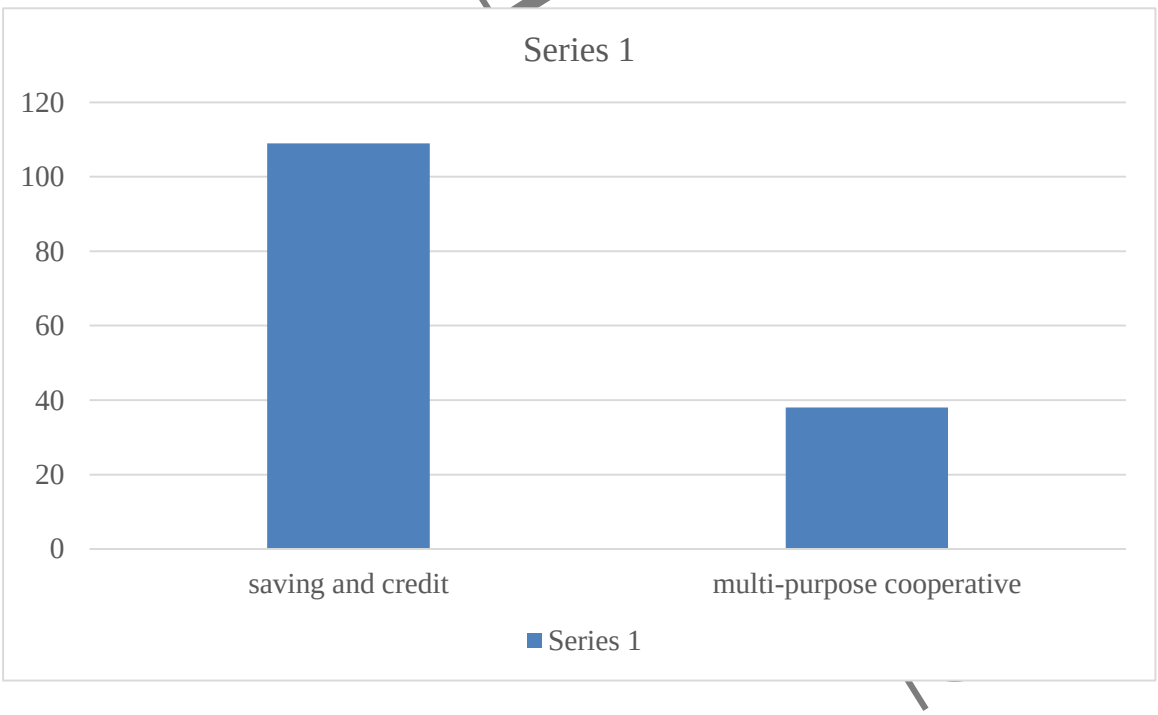


Figure 4.1. 7 Figure to show Demographic analysis of Type of the respondents

Of 147 respondents the study successfully included about 109 saving and credit cooperative and about 38 multi-purpose cooperative. It comprises of 74.1% and 25.9% saving and credit and multi-purpose cooperative .this very idea is presented in chart.

4.1.8 Level of Recklessness

The respondents were slowly escorted to the essence of the study. However before entering the actual question they were asked about the type of cooperative it is. The statement of the question was to please state your view about level of reckless lending in present in cooperative of the responses received; the results obtained are as follows.

Table 4.1. 8 Demographic analysis of Level of reckless lending in cooperative as per the respondents

Percentage		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5%	27	18.4	18.8	18.8
	5-10%	26	17.7	18.1	36.8
	10-15%	25	17.0	17.4	54.2
	15-50%	60	40.8	41.7	95.8
	above 50%	6	4.1	4.2	100.0
	Total	144	98.0	100.0	
Missing	System	3	2.0		
Total		147	100.0		

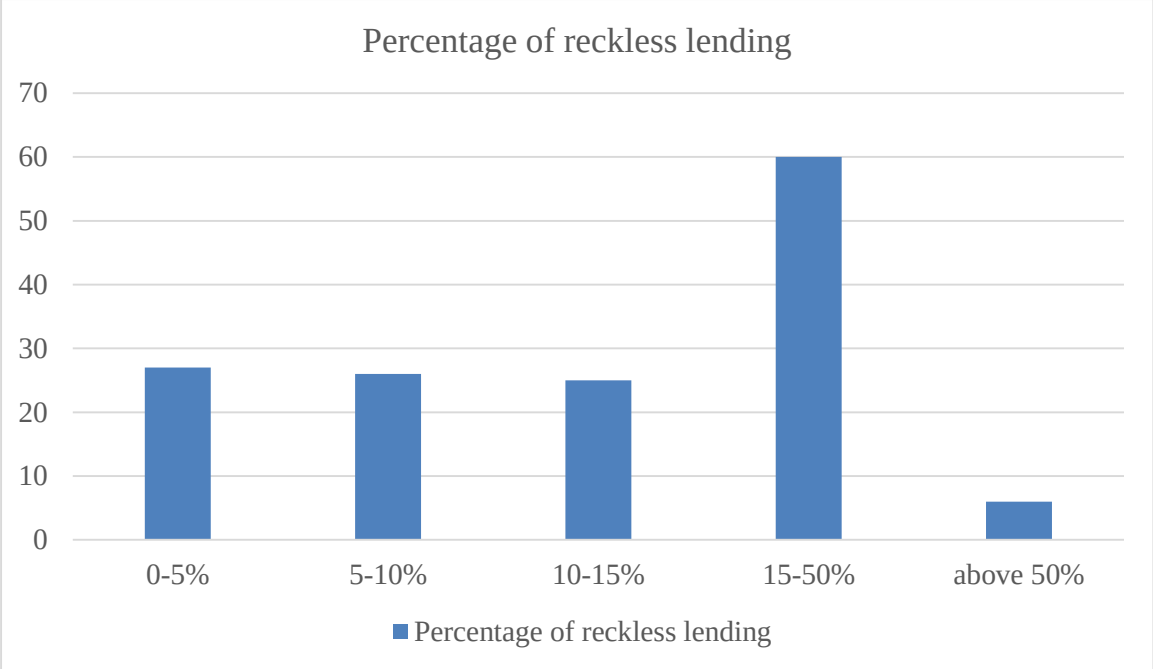


Figure 4.1. 8 Figure to show Demographic analysis of Level of reckless lending in cooperative as per the respondents

Of 147 respondents maximum respondents feel that the level of reckless lending in present in cooperative organization (reckless lending is related to lending to creditors without much scenario evaluation, document processing, and because of nepotism, favoritism or other circumstances) is about 15-50 %. This idea was more than actual anticipated level. This comprises of about 40.8% of the respondents view. The respondents that believed that level of reckless lending to be at about 0-5% comprises of 27 with only 18.4% contribution. Similarly, almost equal number of respondents assume that the level of reckless lending is 5-10% or 10-15% with 26 and 25 respondents. This contributes about 17% in each category. Finally least people assume that the level of reckless lending to be above 50%. It only represents about 4% of the individual.

4.1.9 Causes of Reckless Lending

The respondents before entering the actual question they were asked about causes of reckless lending in cooperative. The statement of the question was to please state your view about what might be the cause of reckless lending in Nepalese cooperative; the results obtained are as follows.

Table 4.1. 9 Demographic analysis of Causes of reckless lending in cooperative

SN	Response	Yes	NO
1	influence from outside forces (outsiders influences and coercion)	38	106
2	Inside dealing with management and high authorities	62	82
3	Related parties forgery and fabrication of credit need and prospect	82	62
4	High pressure on organization to maintain reputation , resulting no rejection to creditors/ borrowers	22	122
5	Lack of credit risk management knowledge to employee and staffs	15	129
6	High pressure in financial market to lend for survival	22	122
7	Non Implementation of lending policy directed by governing bodies	57	87
8	Highly untrained staff	47	97
9	Absence of strict Governing Body	19	125

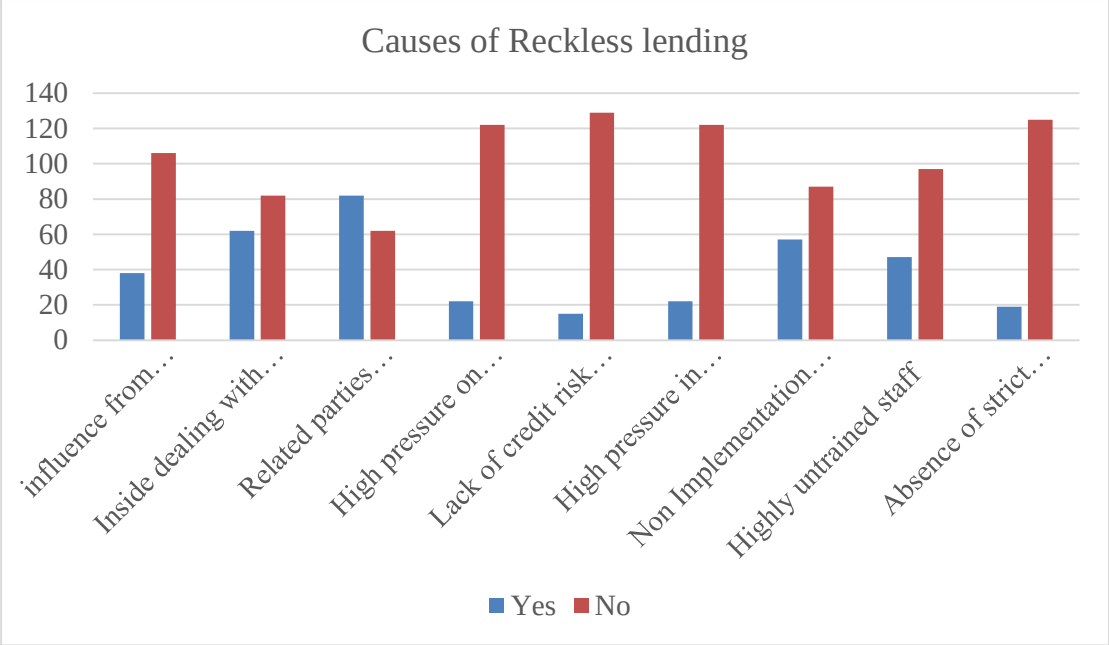


Figure 4.1. 9 Demographic analysis of causes of reckless lending in cooperative

Of the 144 respondents in the study there were least number responses that determined the cause of reckless lending to be highly untrained staffs. The major reason pointed out as cause of reckless lending is non implementation of lending policy by cooperative and forgery and fraud intention of the borrower. the study suggest that there is maximum respondents who said no as cause for High pressure on organization to maintain reputation , resulting no rejection to creditors/ borrowers

4.1.10 Waiting Time

The respondents were again inquired about waiting time in their organization for loan. The statement of the question was to please state how long does a member have to wait to take credit from your cooperative of the responses received; the results obtained are as follows.

Table 4.1. 10 Demographic analysis of waiting time for lending in cooperative

	Duration	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 3 month	24	16.3	16.3	16.3
	3 month	88	59.9	59.9	76.2
	6 month	32	21.8	21.8	98.0
	more than 6 month	3	2.0	2.0	100.0
	Total	147	100.0	100.0	

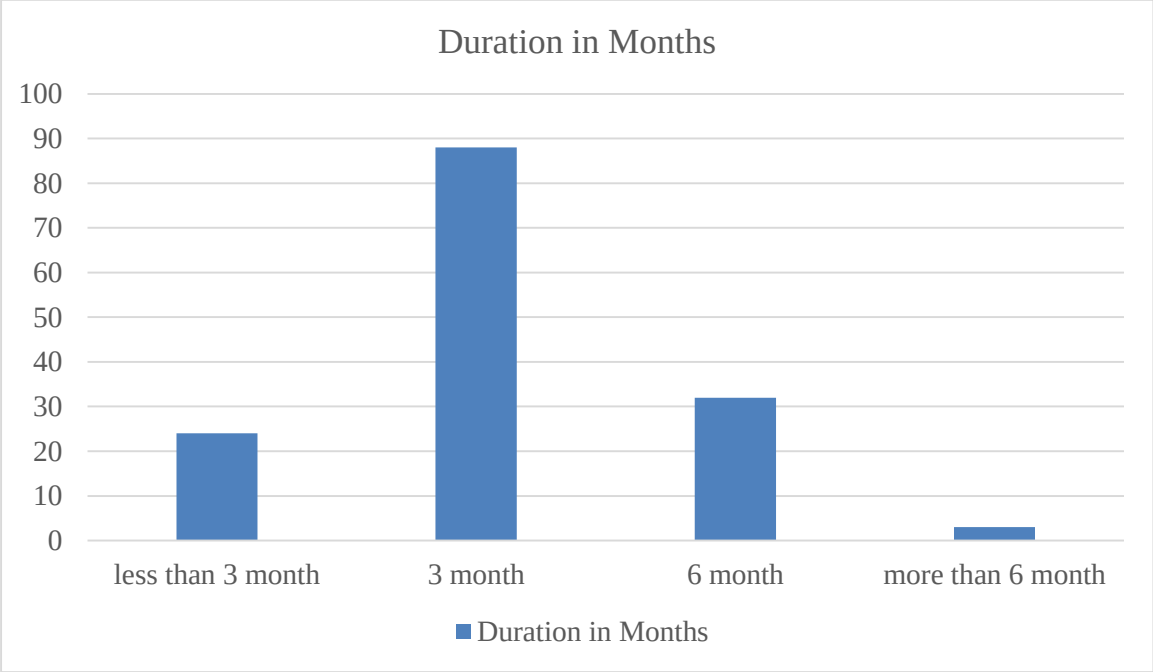


Figure 4.1. 10 Figure to show Demographic analysis of waiting time for lending in cooperative

Of 147 respondents maximum rendents have marked the waiting time to be about 3 months. It comprises of 88 cooperative of the study contributing 59.9 % in the study. This result also have been influenced by the regulatory guideline of 3 month wait time to impart credit. Some organization took it even further and have marked the wait time

to about 6 months and very few more than 6 months. About 32 and 3 organization of the study have marked the wait time to be so with contribution of 21.8% and 2% in the study. There were however, 24 cooperative in the study that had less than 3 month wait time to impart loan. These were closed member cooperative and had very limited people in it.

4.1.11 Conditions for Lending

The respondents before entering the actual study were inquired about requirements to be met by borrowers for lending in cooperative. The statement of the question was to please state what are the requirements to be met by borrower for borrowing money from cooperative. The results obtained are as follows.

Table 4.1. 11 Demographic analysis of condition for lending in cooperative

SN	Condition	Yes	No
1	Be literate	35	109
2	Not holding any political post	9	135
3	At least twenty years old	87	57
4	Regular earning capacity	143	1
5	Must be member of the cooperative group	144	0

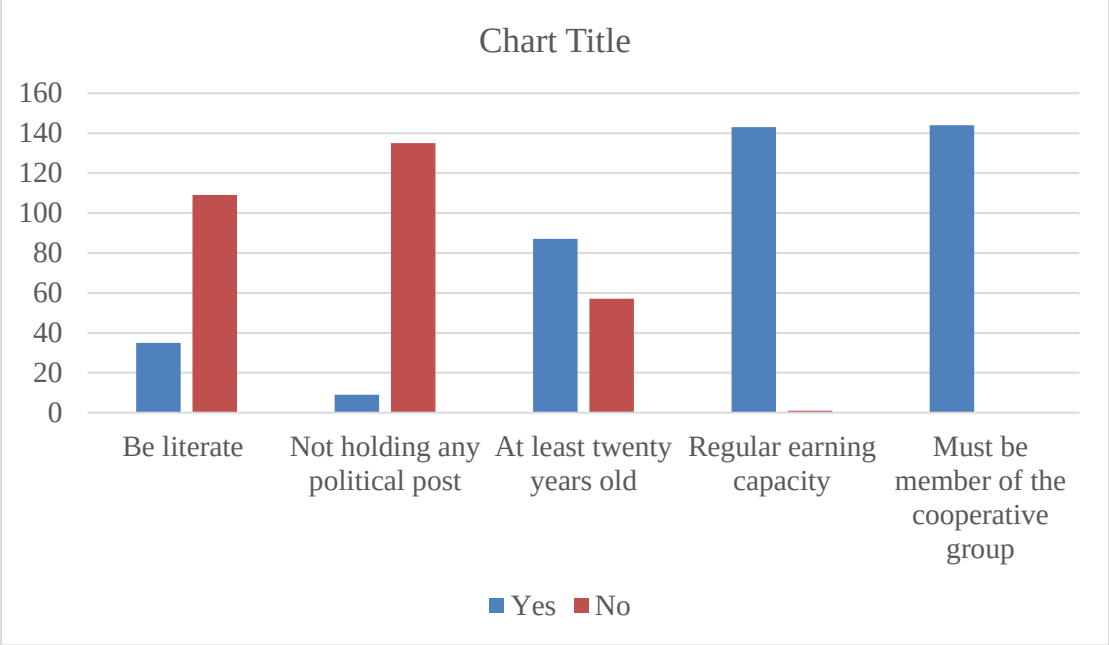


Figure 4.1. 11Figure to show Demographic analysis of condition for lending in cooperative

Of the total respondent every cooperative ensures that the respondent must be a member of the cooperative for borrowing from the cooperative. Similarly regularity of the income of the borrower is also checked. However, borrowing is not affected by the political party association of the respondent. Finally, literacy is not marked as most essential factor when evaluating a borrower for lending

4.1.12 Loan Processing Time

The respondents before entering the actual study were inquired about Loan processing time in their organization. The statement of the question was to please state how long does it take in your organization for credit processing (in days); the results obtained are as follows.

Table 4.1. 12 Demographic analysis of credit processing time for lending in cooperative

	Days	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3-5	49	33.3	33.3	33.3
	6-8	58	39.5	39.5	72.8
	9-11	6	4.1	4.1	76.9
	12-14	16	10.9	10.9	87.8
	15-17	12	8.2	8.2	95.9
	18-20	3	2.0	2.0	98.0
	21 days and more	3	2.0	2.0	100.0
	Total	147	100.0	100.0	

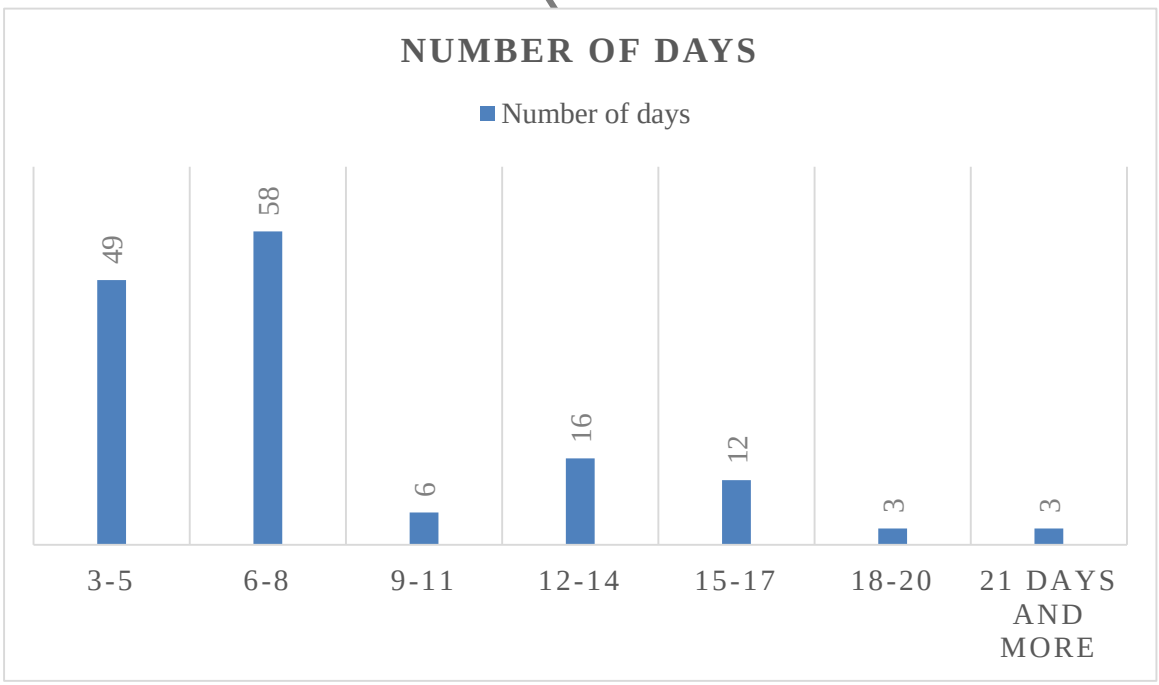


Figure 4.1. 12 Figure to show Demographic analysis of credit processing time for lending in cooperative

Of the 147 respondents maximum organization respond that they process loan in 6-8 and 3-5 days. This composites of 35.9% and 33.3% of the total responses. This idea is supported by the theme of organization where there is easy and simple access to loan when all the documents are proper and managed. There are very few organization that required 12-14 and 15-17 days for processing of the loan. It composites of 10.9% and 8.2% of the total respondents .finally, only 3 organizations said that they need 18-20 and more than 21 days for processing of the document.

4.2 Descriptive Statistics

A descriptive method is used in this research which basically draws conclusions depending on various problems which exist in this research. The descriptive research is used for determining the existence of the independent variable with no comparison between them. Instead the research has underlined the relationship among the variables.

The descriptive data describes the overall information obtained. The survey was conducted using likert scale as a measuring mechanism. This Show level of agreement in the statement by ticking in an appropriate box to indicate consent as

5) Strongly agree 4) agree 3) neutral 2) disagree 1) strongly disagree

Later this is averaged and the independent variable is evaluated as per the score

- mean score from 0.01 to 1.00 is (strongly disagree);
- 1.00 to 2.00 is (disagree);
- from 2.01 until 3.00 is (neutral);
- 3.01 until 4:00 is (agree);
- mean score from 4.01 until 5.00 is (strongly agree)

4.2.1 Descriptive Analysis of Loan Portfolio Management

Six statements were presented regarding Loan portfolio management for respondents. Table shows the rating scale of respondents in following six statements as well as its descriptive characteristics.

Table 4.2. 1 Descriptive analysis of Loan Portfolio Management

Code	Particular	N	Min	Max	Mean	SD	Remarks
LP1	Our organization allocates sufficient fund in different loan portfolio in the beginning of the year	144	1.0	5.0	3.8681	1.49707	Agree
LP2	To ensure diversification of loan, our cooperative takes in consideration credit position on various loan portfolio	144	1.0	5.0	3.4028	1.54793	Agree
LP3	Our cooperative's loan approval on various portfolio is influenced by state of economy (recession, normal, boom, liquidity crisis, liquidity surplus etc).	144	1.0	5.0	4.6736	0.82640	Strongly agree
LP4	Loan portfolio management system results in a periodic and timely study of quality of credit in different categories.	144	1.0	5.0	4.2014	1.10041	Strongly agree
LP5	Our organization uses various credit and accounting ratios to maintain proper balance in the loan portfolio.	144	1.0	5.0	3.3889	1.49643	Agree
LP6	Loan portfolio management is a major part of credit risk management.	144	1.0	5.0	4.4375	1.12018	Strongly agree
	Valid N (listwise)	144					

The descriptive detail indicated above of analysis of Loan Portfolio we have obtained slightly fluctuating results. Here we asked the respondents their idea for level of opinion about Loan Portfolio where the reserves were marked between the liquid scale of 5 to 1. Here 5.00 was the Marker for expressing strong agreement while 1 was for strong disagreement. The obtained answer with then averaged and the summary was drawn as follows

Under this variable, we attempted to study the respondent's attitude towards Loan Portfolio. So as the first question respondents were asked if their organization allocates sufficient fund in different loan portfolio in the beginning of the year. Of 147 company sampled only 144 company responded to the statement. The average of the response from the respondents on the statement it was 3.8681. This indicates that on an average companies agree to the idea that companies allocates sufficient fund in different portfolio in the beginning of the year. The standard deviation of the study was 1.49707

The next statement attempted to understand the respondent's perception about if the cooperative ensures diversification of loan and takes in consideration credit position on various loan portfolio Of 147 company surveyed this statement was responded by 144 people. The mean of the response from the respondent was 3.4028. This indicates that on an average companies agree to the idea that to ensure cooperatives diversification of loan it takes in consideration credit position on various loan portfolio. This time the standard deviation on the response in the statement was 1.54793.

The respondents were then asked whether their cooperative's loan approval on various portfolio is influenced by state of economy. To this statement it of of 147 company 144 organization respondent such that the average of peoples response on the statement was 4.6736. This indicates that the respondents strongly agree to the idea that state of the economy (recession, Liquidity surplus, liquidity crisis etc) strongly influences the follow of credit on different portfolio. The standard aviation associated with the response on the statement was 0.82640

It was then attempted to understand the respondent's perception on if Loan portfolio management system results in a periodic and timely study of quality of credit in different categories. Of 147 companies sampled this statement was responded by 144 creating an average of 4.2014. This indicates that people strongly agree to the idea that loan portfolio management system result in a periodic and timely study of quality of credit in different categories. The standards Deviation of the study was 1.10041

When the respondents were asked if their organization uses various credit and accounting ratios to maintain proper balance in the loan portfolio. Maximum number of respondents agree towards the idea such that it produced a mean of 3.3889. Using the justification about the mean evaluation we can say that on an average respondents here agree that their organization uses various credit and accounting ratios to maintain proper balance in the loan portfolio. The standard deviation here was only 1.49643 which means that the result may vary only up to the limit.

Lastly, respondents were inquired about their perception on if Loan portfolio management is a major part of credit risk management. The respondents were supposed to answer in likert scale with 1 for strongly disagreement and 5 for strong agreement. It was so found that maximum person here strongly agreed to the idea such that the

average mean was 4.4375. That meant that the statement was strongly agreed by the respondents. Here the standard deviation was 1.12018. Which meant the variation was up or down to the limit.

4.2.2 Descriptive Analysis of Credit Risk Identification

Seven statements were presented regarding Credit Risk Identification from respondents. Table shows the rating scale of respondents in following seven statements as well as its descriptive characteristics.

Table 4.2. 2 Descriptive analysis of Credit Risk Identification

Code	Particular	N	Mini	Max	Mean	SD	Remarks
RI1	Risk identification is a major part of credit risk management.	144	1.0	5.0	4.5208	0.91582	Strongly agree
RI2	Credit risk identification helps management to develop risk management strategy to diverse and allocate resources.	144	1.0	5.0	4.2292	1.12641	Strongly agree
RI3	Credit managers majorly contributes to identify the risk in the credit activity	144	1.0	5.0	4.5208	0.86880	Strongly agree
RI4	Our cooperative relies on references and guidance from senior management and BFIS expert's in risk identification process.	144	1.0	5.0	3.6736	1.58149	Agree
RI5	Our cooperative segregates risk in different categories and avoids unwanted risk through proper risk identification process.	144	1.0	5.0	4.1944	1.19016	Strongly agree
RI6	Our cooperative use interviewing technique to identify Risk in from borrowers when identifying Credit risk.	144	1.0	5.0	3.6875	1.41653	Agree
RI7	To facilitate credit risk identification a substantial degree of standardization of process and documentation is required.	144	1.0	5.0	4.5417	1.15798	Strongly agree
	Valid N (listwise)	144					

In the descriptive detail indicated above, of the analysis of Risk identification, we have got more of a non-consistent result. Here, we asked the respondents their idea or level of opinion in regards to Risk Identification. The result we obtained was from maximum and minimum value of 5 and 1. Where, 5 was marker for expressing strong agreement

to the statement and 1 for strong disagreement. This was later averaged and the above summary was drawn.

The first question related to Risk Identification was if Risk identification is a major part of credit risk management. Here the respondents had an average response of 4.5208. It was so found that maximum person here strongly agreed to the idea or question such that the average mean was 4.0733. It means that on average people strongly agreed to the idea that Risk identification is a major part of credit risk management here the standard deviation was 0.91582

Similar to the 1st question, respondents were inquired if credit risk identification helps management to develop risk management strategy to diverse and allocate resources. The respondents were supposed to answer in likert scale with 1 for strongly disagreement and 5 for strong agreement. It was found that maximum person here on an average were strongly agreeing to the idea that Credit risk identification helps management to develop risk management strategy to diverse and allocate resources .the average mean was from the response was 4.2292.Here the standard deviation was 1.12641 which meant the variation was up or down to the limit.

The next question related to Risk Identification was if credit managers majorly contributes to identify the risk in the credit activity. In this statement the respondents have an average response of 4.5208. It was so found that maximum person here strongly agreed to the idea that Credit managers majorly contributes to identify the risk in the credit activity. Here the standard deviation was 0.86880

Again, the respondents were asked their idea on if their cooperative relies on references and guidance from senior management and BFIS expert's in risk identification process. In this statement the respondents answered majorly to the slight upper limit than neutral limit such that the average mean of the study was 3.6736. That means to say that on an average the respondents agree to the idea that their cooperative relies on references and guidance from senior management and BFIS expert's in risk identification process. The idea had a standard deviation of 1.58149

The respondents were asked if their cooperative segregates risk in different categories and avoids unwanted risk through proper risk identification process. In this question the respondents answered majorly to the slightly above upper limit such that the

average mean of the study was 4.1944. That means to say that on an average the respondents strongly agrees to the idea that their cooperative segregates risk in different categories and avoids unwanted risk through proper risk identification process. It has a standard deviation of 1.19016

The next question related to Risk identification was if the cooperative use interviewing technique to identify Risk in from borrowers when identifying Credit risk. In this question the respondents gave an average response of 3.6875. It was so found that on an average maximum person here agreed to the idea. That meant that the statement was agreed by the respondents that the cooperative use interviewing technique to identify Risk in from borrowers when identifying Credit risk. Here the standard deviation was 1.41653

Lastly, the respondents were inquired about if To facilitate credit risk identification a substantial degree of standardization of process and documentation is required.. The respondents were supposed to answer in likert scale with 1 for strongly disagreement and 5 for strong agreement. It was so found that maximum person here agreed to the idea or question such that the average mean was 4.5417.That meant that the statement was strongly agreed by the respondents that To facilitate credit risk identification a substantial degree of standardization of process and documentation is required.. Here the standard deviation was. 1.15798 Which meant the variation was up or down to the limit.

4.2.3 Descriptive Analysis of Credit Risk Analysis

Six statements were presented regarding Credit Risk Analysis from respondents. Table shows the rating scale of respondents in following six statements as well as its descriptive characteristics.

Table 4.2. 3 Descriptive analysis of Credit Risk Analysis

Code	Particular	N	Mini	Max	Mean	SD	Remarks
RA1	Analysis of risk helps credit department to develop risk management strategy and hence better allocation of resources	144	1.00	5.00	4.4097	0.93430	Strongly agree
RA2	Credit Risk analysis is the process of predicting and forecasting the outcome of credit	144	1.00	5.00	4.4028	0.87161	Strongly agree
RA3	Risk analysis involves estimating the magnitude of the consequences	144	1.00	5.00	4.4375	0.94402	Strongly agree
RA4	Our cooperative requires SWOT analysis of project from borrower as part of Risk Analysis.	144	1.00	5.00	2.9653	1.52560	Neutral
RA5	Our cooperative takes consultation and guidance from experts as part of our credit risk analysis	144	1.00	5.00	3.9306	1.33093	Agree
RA6	Our organization prepares contingency of dispersed loan as credit risk analysis method.	144	1.00	5.00	4.1458	1.12796	Strongly agree
	Valid N (listwise)	144					

In the descriptive detail indicated above, of the analysis of Risk Analysis, we have got more of a non-consistent result. Here, we asked the respondents their ideas about risk Analysis ideologies and techniques. The result we obtained was from maximum and minimum value of 5 and 1. Where, 5 was marker for expressing strong agreement to the statement and 1 for strong disagreement. This was later averaged and the above summary was drawn.

The first statement, respondents were inquired was if Analysis of risk helps credit department to develop risk management strategy for better allocation of resources. The respondents were supposed to answer in likert scale with 1 for strongly disagreement and 5 for strong agreement. It was so found that on an average respondents here strongly agreed to the idea such that the average mean was 4.4097. Here the standard deviation was 0.93430 which meant the variation was up or down to the limit.

The statement related to Risk Analysis was to know respondents view on if Credit Risk analysis is the process of predicting and forecasting the outcome of credit in cooperative. In this question the respondents have an average response of 4.4028.It was so found that maximum person here strongly agreed to the idea that Credit Risk analysis is the process of predicting and forecasting the outcome of credit. Here the standard deviation was 0.87161

Similar to the previous statement, respondents were inquired their views on if about if Risk analysis involves estimating the magnitude of the consequences. The respondents were supposed to answer in likert scale with 1 for strongly disagreement and 5 for strong agreement. It was so found that on average maximum person here strongly agreed to the idea such that the average mean was 4.4375.Here the standard deviation was 0.94402 which meant the variation was up or down to the limit.

The next statement related to Risk Analysis was if their cooperative requires SWOT analysis of project from borrower as part of Risk Analysis. In this statement the respondents have an average response of 2.9653.It was so found that maximum person here were neutral to the idea that their organization requires a swot analysis from borrower. Here the standard deviation was 1.52560

Again, the respondents were asked if their cooperative takes consultation and guidance from experts as part of our credit risk analysis in this question the respondents answered majorly to the higher limit such that the average mean of the study was 3.9306. That means to say that on an average the respondents agree to the idea that their cooperative takes consultation and guidance from experts as part of our credit risk analysis .It has a standard deviation of 1.33093

Finally, the respondents were asked if their organization prepares contingency of dispersed loan as credit risk analysis method.to which the average response of the respondents was 4.1458. Using the justification about the mean evaluation we can say that maximum respondents here strongly agree that their organization prepares contingency of dispersed loan as credit risk analysis method. The standard deviation here is only 1.12796 which means that the result may vary only up to the limit of 1.12796

4.2.4 Descriptive Analysis of Risk Assessment

Five statements were presented regarding Credit Risk Assessment from respondents. Table shows the rating scale of respondents in following five statements as well as its descriptive characteristics.

Table 4.2. 4 Descriptive analysis of Credit Risk Assessment

Code		N	Min	Max	Mean	S.D	Remarks
RS1	Our cooperative reviews borrowers income before providing credit	144	1.00	5.00	4.5972	1.03990	Strongly agree
RS2	Credit risk Assessment ensures efficient credit worthiness of borrowers	144	1.00	5.00	4.6319	0.83412	Strongly agree
RS3	Our organization takes in consideration past repayment records of borrower before approving credit.	144	1.00	5.00	4.4931	0.92363	Strongly agree
RS4	Our organization takes in consideration financial integrity (collateral security, personal guarantee) of borrower before granting loan.	144	1.00	5.00	4.4028	1.05988	Strongly agree
RS5	Our organization inquires about moral integrity of borrower before granting loan.	144	1.00	5.00	3.7500	1.39680	Agree
	Valid N (listwise)	144					

In the descriptive detail indicated above, of the analysis of Risk Assessment, we have got more of a consistent result. Here, we asked the respondents their idea on Risk Assessment. The result we obtained was from maximum and minimum value of 5 and 1. Where, 5 was marker for expressing strong agreement to the statement and 1 for strong disagreement. This was later averaged and the above summary was drawn.

The respondents were asked if their cooperative reviews borrower's income before providing credit. In this question the respondents answered majorly to the upper limit such that the average mean of the study was 4.5972. That means to say that on an average the respondents strongly agree with the statement that their cooperative reviews borrower's income before providing credit .it had a standard deviation of 1.03990

The next question related to Risk Assessment was if Credit risk Assessment ensures efficient credit worthiness of borrowers. In this question the respondents have an

average response of 4.6319. It was so found that maximum person here strongly agree to the statement such that credit worthiness is looked as part of Risk assessment before imparting loan. Here the standard deviation was 0.83412

Similar to the previous question, respondents were inquired on if their organization takes in consideration past repayment records of borrower before approving credit. The respondents were supposed to answer in likert scale with 1 for strongly disagreement and 5 for strong agreement. It was so found that maximum person here strongly agreed to the idea or question such that the average mean was 4.4028. That meant that the statement was strongly agreed by the respondents that previous loan repayment record influences present loan approval situation. Here the standard deviation was 0.92363 which meant the variation was up or down to the limit.

The question related to Risk Assessment was to understand the respondents view on if their organization takes in consideration financial integrity (collateral security, personal guarantee) of borrower before granting loan. In this question the respondents gave an average response of 4.4028. It was so found that on an average maximum person here strongly agreed to the statement. Here the standard deviation was 1.05988

The respondents were asked if their organization inquires about moral integrity of borrower before granting loan. In this question the respondents answered majorly to the upper limit such that the average mean of the study was 3.7500 .That means to say that on an average the respondents agrees to the idea that their organization makes some kind of inquiry before moral integrity of the borrower before granting loan.it has a standard deviation of 1.39680

4.2.5 Descriptive Analysis of Risk Monitoring

Five statements were presented regarding Credit Risk Monitoring from respondents. Table shows the rating scale of respondents in following five statements as well as its descriptive characteristics.

Table 4.2. 5 Descriptive analysis of Credit Risk Monitoring

Code		N	Mini	Max	Mean	S.D	Remarks
RM1	Our cooperative regularly reviews borrowers project status after credit dispersion	144	1.00	5.00	4.5278	0.98197	Strongly agree
RM2	Risk monitoring ensures that appropriate controls and responses are in place.	144	1.00	5.00	4.4861	0.96067	Strongly agree
RM3	our organization have proper training to detect abnormalities at an early stage	144	1.00	5.00	4.3681	1.16922	Strongly agree
RM4	Transactions of the borrowers are evaluated as part of Risk monitoring on regular basis.	144	1.00	5.00	2.9931	1.44114	Neutral
RM5	Our cooperative monitors the use of credit by borrowers (if the fund is used in intended purpose)	144	1.00	5.00	4.3125	1.37647	Strongly agree
	Valid N (listwise)	144					

In the descriptive detail indicated above, of Risk Monitoring related context is done where we have got more or less non consistent result. The result we obtained was from maximum and minimum value of 5 and 1. 5 was marker for expressing strong agreement to the statement and 1 for strong disagreement. This was later averaged and the above summary was drawn.

When the respondents were asked if their cooperative regularly reviews borrowers project status after credit dispersion the mean response was 4.5278. Using the justification for about mean evaluation we can say that on an average respondent here strongly agree to the idea that status of the project is evaluated after disbursement of credit. The standard deviation on the statement was 0.98197 which means that the result may vary only up to that limit.

Similar to the first question when the respondents were enquired on their view if Risk monitoring ensures that appropriate controls and responses are in place. The mean response here was found to be 4.4861 which means that maximum people strongly agree to the idea. Here standard deviation of the response was 0.96067, Indicating that the result could fluctuate within the limit of 0.96067

The next question attempted to understand the respondents' perception on if their organization have proper training to detect abnormalities at an early stage .Here the respondents' answers seems to incline more towards an agreement. Such that the average of the answer replied by the respondent was 4.3681. it means that average number of people strongly agree to the idea that their organization have proper training and skills to detect abnormalities at an early stage .here the standard deviation of the response was 1.16922

Then the research attempted to understand the respondent's idea on if Transactions of the borrowers are evaluated as part of Risk monitoring on regular basis. In this question respondents projected neutral view on an average. Here the average of the response from the respondents was 2.9931 indicating that people neither agreed nor rejected the idea of evaluating the transaction of borrowers as part of risk monitoring. The standard deviation of the study was 1.44114

The final question on the variable Risk monitoring attempted to investigate respondents idea on if their cooperative monitors the use of credit by borrowers (if the fund is used in intended purpose).Here it was found that on an average people strongly agreed to the idea that cooperative checks if the fund is used in the intended purpose. The average response of the respondents to the statement was 4.3125 indicating an inclination of people towards the statement. The standard deviation of the statement was 1.37647 indicating that the response may fluctuate to that limit.

4.2.6 Descriptive Analysis of Credit Risk Management

Six statements were presented regarding Credit Risk Management from respondents. Table shows the rating scale of respondents in following Six statements as well as its descriptive characteristics.

Table 4.2. 6 Descriptive analysis of Credit Risk Management

Code		N	Mini	Max	Mean	S.D	Remarks
CRM1	Employees in our organization are well aware about the need of credit risk management in our business	144	1.00	5.00	4.6042	0.86274	Strongly agree
CRM2	There are sufficient tools and guidelines in our organization to manage credit risk	144	1.00	5.00	4.5000	0.91606	Strongly agree
CRM3	Our organization have been able to successfully manage credit risk for long time	141	1.00	5.00	4.4397	0.92094	Strongly agree
CRM4	Our organization follows every policy and guidelines marked by our regulators in management of the credit risk	141	1.00	5.00	4.1064	1.17535	Strongly agree
CRM5	Our cooperative regularly emphasizes on credit follow up as part of credit risk management	141	1.00	5.00	4.4113	1.08937	Strongly agree
CRM6	Our employees need regular and timely training and assistant to manage credit risk in the organization	141	1.00	5.00	2.7092	1.70100	Neutral
	Valid N (listwise)	141					

In the descriptive detail indicated above, of the analysis of credit Risk Management, we have got more of a consistent result. Here, we asked the respondents their idea on Credit risk management. The result we obtained was from maximum and minimum value of 5 and 1. Where, 5 was marker for expressing strong agreement to the statement and 1 for strong disagreement. This was later averaged and the above summary was drawn.

The respondents were asked if Employees in their organization are well aware about the need of credit risk management in the business. In this question the respondents answered majorly to the upper limit such that the average mean of the study was 4.6042. That means to say that on an average the respondents strongly agreed that Employees in their organization are well aware about the need of credit risk management in the business .it has a standard deviation of 0.86274

The next question related to Credit risk management was if there are sufficient tools and guidelines in our organization to manage credit risk .in this statement the

respondents have an average response of 4.5000. It was so found that maximum person here strongly agreed to the idea that there are sufficient tools and guidelines in the organization to manage credit risk. Here the standard deviation was 0.91606

Similar to the previous question, respondents were inquired if the cooperative organization have been able to successfully manage credit risk for long time. The respondents were supposed to answer in likert scale with 1 for strongly disagreement and 5 for strong agreement. It was so found that maximum person here agreed to the idea or question such that the average mean was 4.4397. That meant that the statement was strongly agreed by the respondents. Here the standard deviation was 0.92094 which meant the variation was up or down to the limit.

The next statement related to Credit risk management was if there organization follows every policy and guidelines marked by our regulators in management of the credit risk. In this question the respondents have an average response of 4.1064. It was so found that maximum person here strongly agreed to the idea that their organization follows every policy and guidelines marked by the regulator to manage the credit risk. Here the standard deviation was 1.17535

Similar to the previous question, respondents were inquired if their cooperative regularly emphasizes on credit follow up as part of credit risk management. The respondents were supposed to answer in likert scale with 1 for strongly disagreement and 5 for strong agreement. It was so found that maximum person here strongly agreed to the idea that the average mean was 4.4113. Here the standard deviation was 1.08937 which meant the variation was up or down to the limit.

The respondents were inquired if their employees need regular and timely training and assistant to manage credit risk in the organization. In this question the respondents answered majorly to the neutral such that the average mean of the study was 2.7092. That means to say that on an average the respondents neither agree nor disagree to the idea that the their employees need regular and timely training and assistant to manage credit risk in the organization.it has a standard deviation of 1.70100

4.3 Inferential Analysis

This section consists of correlation analysis of dependent variable and independent variables well as regression analysis for hypothesis testing

4.3.1 Correlation Analysis

Correlation is a statistical measure that indicates the extent to which two or more variables fluctuate together. It is used to checking directional relationship between variables. This section of the study presents the results and discussions of the correlation analysis. The correlation analysis has been carried out to investigate the direction and magnitude of the relationship of credit management procedure and the credit risk management o Nepalese cooperative. The correlation measures the strength of the linear relationship between variables. The strength of linear association between two numerical variables in a sample of population is determined by the correlation coefficient. More specifically, it shows the correlation coefficient of dependent and independent variables for selected Nepalese cooperative organizations. The table shows the Kendall's Tau correlations coefficients of dependent (Credit risk management) and independent (Loan portfolio, Risk identification, Risk analysis, Risk assessment, Risk monitoring) variables for Nepalese cooperative organization. Having indicated the descriptive statistics, the Kendall's Tau correlation coefficients have been computed and the results are presented in the Table 4.3.1

Table 4.3. 1 Correlation matrix

		L. P	R.I	R.A	R.S	R.M	C.R.M
L. P	Pearson Correlation	1	.760**	.718**	.685**	.623**	.647**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	144	144	144	144	144	141
R.I	Pearson Correlation		1	.750**	.785**	.610**	.651**
	Sig. (2-tailed)			.000	.000	.000	.000
	N	14	144	144	144	144	141
R.A	Pearson Correlation			1	.709**	.562**	.701**
	Sig. (2-tailed)				.000	.000	.000
	N		144	144	144	144	141
R.S	Pearson Correlation				1	.630**	.721**
	Sig. (2-tailed)					.000	.000
	N			144	144	144	141
R.M	Pearson Correlation					1	.691**
	Sig. (2-tailed)						.000
	N					144	141
C.R.M	Pearson Correlation						1
	Sig. (2-tailed)						

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

CRM stands for Credit Risk management. It is the major focus variable in the study (dependent variable). Here the study concerns with impact of all the independent variables in supporting credit risk management of cooperatives in Nepal. There were 6 statements in Loan portfolio (L.P), 7 statements in Risk Identification (R.I), 6 statements in Risk Analysis (R.A), 5 statements in Risk monitoring (R.M) and 6 statements in Credit risk management. Here the correlation matrix represents relationship between each variable, dependent or independent.

The relation between Loan Portfolio and Credit Risk management is shown in last column, first Row. Here the relation presented is 0.647 between Loan Portfolio and Credit Risk management. In other words, with 1 percentage increase in effort for positive Loan Portfolio there is 0.647 Positive impact in Credit Risk Management. Here, there is significance level of 0.000 .It means to say that the p value is less than 0 so there is significance of correlation. In other words, this correlation is justified and significant at both 1% and 5% level of significance.

The relationship between the Risk Identification and Credit Risk Management is shown here in the Last column second row file. Here the relation presented is 0.651 between and Risk Identification and Credit Risk Management. In other words, with 1 percentage Positive impact on Risk Identification there is 0.651Positive impact on Credit Risk management. There is significance level of 0.000 .it means to say that the p value is less than 0 so there is significance of correlation here. In other words this correlation is justified and significant at both 1% and 5% level of significance.

The relationship between the Risk analysis and Credit Risk Management is shown here in the Last column Third row file. Here the relation presented is 0.701 between and Risk Analysis and Credit Risk Management. In other words, with 1 percentage Positive effect for Risk analysis there is 0.701 positive relation with Credit risk management. There is significance level of 0.000 .it means to say that the p value is less than 1% so there is significance of correlation here. In other words this correlation is justified and significant at both 1% and 5% level of significance.

The relationship between the Risk Assessment and Credit Risk Management is shown here in the Last column Fourth row file. Here the relation presented is 0.721 between and Risk Assessment and Credit Risk Management. In other words, with 1 percentage

Positive effect for Risk Assessment there is 0.721 worth positive relation with Credit risk management. There is significance level of 0.000 .it means to say that the p value is less than 1% so there is significance of correlation here. In other words this correlation is justified and significant at both 1% and 5% level of significance.

The relationship between the Risk Monitoring and Credit Risk Management is shown here in the Last column fifth row file. Here the relation presented is 0.691 between and Risk Monitoring and Credit Risk Management. In other words, with 1 percentage Positive impact on Risk Monitoring there is 0.691 Positive impact on Credit Risk management. There is significance level of 0.000 .it means to say that the p value is less than 0 so there is significance of correlation here. In other words this correlation is justified and significant at both 1% and 5% level of significance.

Apart that, the correlation matrixs also shows similar positive relation between the independent variables. Here, it shows that the relation between Loan portfolio management and Risk Identification is 0.760. That means if loan portfolio is positively managed risks are better identified. Similarly, relation of loan portfolio and other variable of Risk Analysis, Risk assessment and Risk Monitoring is also positive with 0.718, 0.685 and 0.623. It means that as loan portfolio properly managed and increased all other variables also positively influences. The significance level of all the variables relation is 0.000 indicating significance of the relation. This is similar in case of relation of Risk identification with Risk Analysis, Risk Assessment, and Risk Monitoring. As risk identification increases there is positive impact on all other mentioned variables. The relation of risk identification with Risk Analysis, Risk Assessment, and Risk Monitoring is 0.750, 0.785 and 0.610 respectively. There is significance level of 0.000 .it means to say that the p value is less than 0 so there is significance of correlation here. In other words this correlation is justified and significant at both 1% and 5% level of significance. Again, in case of relation of Risk Analysis with Risk Assessment, and Risk Monitoring. As risk Analysis increases there is positive impact on Risk Assessment and Risk Monitoring. The relation of risk Analysis with Risk Assessment, and Risk Monitoring is 0.709 and 0.562 respectively. There is significance level of 0.000 .it means to say that the p value is less than 0 so there is significance of correlation here. In other words this correlation is justified and significant at both 1% and 5% level of significance. Lastly the relation of Risk Assessment and Risk Monitoring also shows

similar relation. As risk Analysis increases the impact on risk monitoring also increases by 0.630. The significance of the relation is 0.00 here too indicating proper significance as a whole.

4.3.2 Regression Analysis

Having indicated the Pearson Correlation coefficient, the regression analysis has been carried out to examine the Credit Risk Management situation with its determinants Loan Portfolio, Risk Identification, Risk Analysis, Risk Assessment and risk Monitoring .The results are presented in the table below. More specifically, Table shows the regression results of impact of E-marketing on consumer buying behaviors.

Estimated regression results of credit risk management process impacts on Credit risk management

The results are based on 148 observations by using linear regression model. The study applied the following regression model:

Model 1

$Y= \beta0 + \beta1\ X_1 + \beta2\ X_2 + \beta3\ X_3 + \beta4\ X_4 + \beta5\ X_5 + U$

where,

Y= CRM = Credit Risk Management,

X_1 = L P = Loan Portfolio Management

X_2 = R I = Risk Identification,

X_3 = R A = Risk Analysis

X_4 =R S= Credit risk Assessment

X_5= R M = Credit Risk Monitoring

U= error, β0= constant term, β1 β2 β3 β4 and β5 are the coefficient of variables.

4.3.2 .1 Model Summary

Table 4.3. 2 Table to show model summary of the study

Model		R	R Square	Adjusted R Square	Std. Error of the Estimate
dimension0	1	.811[a]	.658	.645	.46170

a. Predictors: (Constant), Risk Monitoring, Risk Analysis , Risk Assessment, Loan Portfolio, Risk Identification

R is the representation of coefficient of correlation between the dependent and independent variables. In this case the coefficient of correlation is 0.811. It is positive and high. It means to say that with all other non-indicated variable constant and 0 there is positive correlation between the identified independent variable and the dependent variable.in other words, with 1% increase in independent variable there is 0.811 increase in dependent variable.

R Square is the representation of coefficient of determinant. It is simply the square of R. it explains the % of variable explained by dependent of the independent. In other words, here the independent variable's 65.80% is explained by the dependent. The value explained after adjustment however is 64.5%. so 64.5% of the value of independent is explained by the dependent variable after adjustment.

The model summary provides detail about the standard error of estimate. In another words it is the explanation of the standard deviation of the study. In this case the standard deviation of the study is 0.46170 .This standard deviation is the up and downs from the answer obtained from the regression equation. Here, standard error of estimate says that the result calculated from the regression through multiple regression equation is deviated by 0.46170 in an average.

4.3.3 ANOVA

Analysis of variance (ANOVA) in a multiple regression analysis is used to show whether the model is significant or not. ANOVA helps to show whether the model that

includes different independent variable is significant or not at given level of confidence interval to measure the dependent variable.

Table 4.3. 3 Table to show ANOVA of the study

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55.307	5	11.061	51.891	.000[a]
	Residual	28.777	135	.213		
	Total	84.084	140			

a. Predictors: (Constant), Risk Monitoring, Risk Analysis , Risk Assessment, Loan Portfolio, Risk Identification

b. Dependent Variable: Credit Risk Management

ANOVA table is very efficient in calculation of F value. The F value is further efficient in understanding the significance of the overall study. In other words, ANOVA table is useful to understand the significance of the study as a whole.

The mean sum of square is obtained by dividing the sum of square by the degree of freedom. The mean of sum of square of regression is called Mean sum of regression (MSR) and the mean of residual is called mean sum of error (MSE). The mean sum of regression is 11.061 and mean sum of error is 0.213. MSR is obtained by dividing SSR with d.f. or 55.307 divided by 5.the MSE is obtained by dividing SSE with d.f. or 28.777 divided by 135.

F value is obtained by dividing MER with MSE. In other words it is the value or proportion of error on average of the regression. The F value is 51.891

Here, we are F-significance value of $p<0.001$. This means that the regression model has a less than 0.001 likelihood (probability) of giving a wrong prediction. Hence, the regression model has a confidence level of above 95% which confirms that our regression model was appropriate and the results reliable.

This very information is presented in the model summary too. The significance of F here is 0.000. F level explains the overall significance of the study. Since p value here is 0.000 the alternative hypothesis is accepted and we can justify that the model is significant.

4.3.4 Coefficients of Regression Model

The coefficients of regression model shows the different contributing variables to measure the dependent variable. Different contributing variables in this study are credit Risk management Process and dependent variable is Credit Risk Management. Therefore, coefficient table shows the p-value, test statistic value and standard error of each individual value.

Table 4.3. 4 Table to show Coefficient of regression Model

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.302	.244		1.237	.218		
	Loan Portfolio	.062	.079	.067	.777	.439	.343	2.916
	Risk Identification	-.064	.096	-.066	-.674	.501	.264	3.785
	Risk Analysis	.294	.082	.301	3.606	.000	.364	2.750
	Risk Assessment	.313	.090	.307	3.458	.001	.321	3.112
	Risk Monitoring	.313	.066	.326	4.703	.000	.527	1.897

a. Dependent Variable: Credit Risk Management

Coefficient table provides detail description about the variables impact on the dependent variable. It provides idea about the significance of individual variables. Here, The coefficient table also helps to formulate an equation to determine the value of Credit risk management with involvement of all other independent variable. From the above coefficient table the below equation can be formulated.

Y=a+ b1x1+b2x2+b3x3+b4x4+b5x5+ e1

Y= 0.302+ 0.062x1- 0.064x2+ 0.294x3+ 0.313x4+ 0.313x5+ e1

Where,

Y= Credit Risk Management

a = Constant

b1, b2, b3, b4, b5 = Regression coefficient

X_1= Loan Portfolio Management

The X_1 variable represents Loan Portfolio.it is an independent variable. As per the coefficient table the impact of Loan Portfolio management on the equation of Credit Risk Management is 0.062. In other words, with all other things constant and defined and no impact of other undefined factor in the equation the Credit Risk Management value increases by 0.062 with every unit increase in the Loan Portfolio Management.

The standard error of the variable is .079. It means to say that the value of Loan Portfolio may fluctuate up or down to the extent of 0.079.the standard error of X_1 is expressed as Sb_1

T test is obtained be dividing the particular coefficient by the standard deviation of the coefficient. Here, value of T is obtained by dividing value of coefficient 0.302 by standard error of the variable 0.079.this makes the value of T as 0.777.

The significance level of the variable here is 0.439. This means to say that the probability value is more than 5, making error associated with the variable too high. So there is no proper significance of this variable in the study or model at 1% and 5% level of significance.

The multi Collinearity in the study in the related variable is shown in the last column. Here the VIF of loan portfolio management is 2.961 which is less than 10 so we can say that there is no multi Collinearity in the variable among other.

X_2= Risk Identification

The X_2 variable represents Risk Identification. It is an independent variable. As per the coefficient table the impact of Risk Identification on the equation of Credit Risk Management is -0.064. In other words, with all other things constant and defined and no impact of other undefined factor in the equation the Credit Risk Management value increases by -0.064 with every unit increase in the Risk Identification.

The standard error of the variable is 0.096. It means to say that the value of Risk Identification may fluctuate up or down to the extent of 0. 096. The standard error of X_2 is expressed as Sb_2

T test is obtained be dividing the particular coefficient by the standard deviation of the coefficient. Here, value of T is obtained by dividing value of coefficient -0.064 by standard error of the variable 0.096.this makes the value of T as -0.674.

The significance level of the variable here is 0.501. This means to say that the probability of error is 0.501 making error associated with the variable 50.1%. So there is no proper significance of this variable in the study or model. In other words the there is no significance of importance of the variable as the error associated with is more than 5%.

The multi Collinearity in the study in the related variable is shown in the last column. Here the VIF of Risk Identification is 3.785 which is less than 10 so we can say that there is no multi Collinearity in the variable among other .

X_3= Risk Analysis

The X_3 variable represents Risk Analysis. It is an independent variable. As per the coefficient table the impact of Risk Analysis on the equation to find the impact on Credit Risk Management is 0.294. In other words, with all other things constant and defined and no impact of other undefined factor the credit risk management value increases by 0.294 with every unit increase in the Risk Analysis

The standard error of the variable is .082. It means to say that the value of Risk Analysis may fluctuate up or down to the extent of .082.the standard error of X_3 is expressed as Sb_3

T test is obtained be dividing the particular coefficient by the standard deviation of the coefficient. Here, value of T is obtained by dividing value of coefficient 0.294 by standard error of the variable .082.this makes the value of T as 3.606.

The significance level of the variable here is 0.000. This means to say that the probability value is less than 1% and 5%, making error associated with the variable 0%. So there is proper significance of this variable in the study or model at 5% and 1% level of significance

The multi Collinearity in the study in the related variable is shown in the last column. Here the VIF of Risk Analysis is 2.750 which is less than 10 so we can say that there is no multi Collinearity in the variable among other .

X_4 = Risk Assessment

The X_4 variable represents Risk Assessment. It is an independent variable. As per the coefficient table the impact of Risk Assessment on the equation Credit Risk Management is 0.313. In other words, with all other things constant and defined and no impact of other undefined factor in the equation of credit risk management, its value increases by 0.313 with every unit increase in the Risk Assessment.

The standard error of the variable is .090. It means to say that the value of Risk Assessment may fluctuate up or down to the extent of .090.the standard error of X_4 is expressed as Sb_4

T test is obtained be dividing the particular coefficient by the standard deviation of the coefficient. Here, value of T is obtained by dividing value of coefficient .313 by standard error of the variable .090 .this makes the value of T as 3.458

The significance level of the variable here is .001. This means to say that the probability value is more than 1 and less than 5, making error associated with the variable 1%. So there is proper significance of this variable in the study or model if we consider the

error level as 5% and the variable has no proper significance if we consider the error level of 1%.

The multi Collinearity in the study in the related variable is shown in the last column. Here the VIF of Risk Assessment is 3.112 which is less than 10 so we can say that there is no multi Collinearity in the variable among other .

X_5= Risk Monitoring

The X_5 variable represents Risk Monitoring. It is an independent variable. As per the coefficient table the impact of Risk monitoring on the equation to find the impact on Credit risk management is 0.313. In other words, with all other things constant and defined and no impact of other undefined factor in the equation the Credit risk management value increases by 0.313 with every unit increase in the Risk Monitoring

The standard error of the variable is 0.066. It means to say that the value of Risk monitoring may fluctuate up or down to the extent of 0.066 .the standard error of X_5 is expressed as Sb_5

T test is obtained be dividing the particular coefficient by the standard deviation of the coefficient. Here, value of T is obtained by dividing value of coefficient 0.313 by standard error of the variable 0.066 .this makes the value of T as 4.703

The significance level of the variable here is .000. This means to say that the probability value is less than 1, making error associated with the variable 0.000. So there is proper significance of this variable in the study or model if we consider the error level as 5% or 1% error level of significance

e1= Error of variable

The multi Collinearity in the study in the related variable is shown in the last column. Here the VIF of loan is risk monitoring 1.897 which is less than 10 so we can say that there is no multi Collinearity in the variable among other.

4.4 Hypothesis Testing

Hypothesis testing is an act in statistics whereby an analyst tests an assumption regarding a population parameter. The methodology employed by the analyst depends

on the nature of the data used and the reason for the analysis. Hypothesis testing is used to infer the result of a hypothesis performed on sample data from a larger population.

The test tells the analyst whether his primary hypothesis is true. Statistical analysts test a hypothesis by measuring and examining a random sample of the population being analyzed. Since that is often impractical, researchers typically examine a random sample from the population. If sample data are not consistent with the statistical hypothesis, the hypothesis is rejected.

Each hypothesis is tested and analyzed individually, and the analysis is done with system designed for statistical analyses (SPSS). Five alternative hypotheses were drawn for the purpose of identifying relationship between dependent and independent variables in this study. Test on each of these hypotheses is discussed below:

This section is focused on testing hypothesis developed for the study. Hypothesis evaluates two mutually exclusive statements to determine which statement is best supported by sample data. Regression analysis has been used to test the hypothesis. The hypothesis developed for this study and its acceptance or rejection is justified below.

Table 4.4 1 Table to show Hypothesis result of the study

Model		Unstandardized Coefficients		t	Sig.	Hypothesis (level of significance)	Justification
		B	Std. Error			1%	**5%**
1	(Constant)	.302	.244	1.237	.218		
	Loan Portfolio	.062	.079	.777	.439	**Rejected**	**Rejected**
	Risk Identification	-.064	.096	-.674	.501	**Rejected**	**Rejected**
	Risk Analysis	.294	.082	3.606	.000	**Accepted**	**Accepted**
	Risk Assessment	.313	.090	3.458	.001	**Accepted**	**Accepted**
	Risk Monitoring	.313	.066	4.703	.000	**Accepted**	**Accepted**

Hypothesis I

H_1: There is no significant relationship between Loan Portfolio management and Credit Risk Management

Result and Interpretation

From the Regression analysis Table 4.16 the p value of Loan portfolio management, is more than 0.01(0.439>0.01) or 0.05(0.439>0.05), Null hypothesis is accepted at 1% or 5% level of significance. It means that there no significant relationship between Loan portfolio management and Credit risk management

Hypothesis II

H_2: There is no significant relationship between Risk Identification and Credit Risk Management

Result and Interpretation

From the Regression analysis Table 4.16 the p value of Risk Identification, is more than 0.01(0.501>0.01) or 0.05(0.501>0.05), Null hypothesis is accepted at 1% or 5% level of significance. It means that there no significant relationship between Risk Identification and Credit risk management

Hypothesis III

H_3: There is significant relationship between Risk analysis and Credit Risk Management

Result and Interpretation

From the Regression analysis Table 4.16 the p value of Risk Analysis, is less than 0.01(0.000<0.01), Null hypothesis is rejected at 1% and 5% level of significance. Thus, there is significant relationship between Risk Analysis and Credit Risk Management.

Hypothesis IV

H_4: There is significant relationship between Risk Assessment and Credit Risk Management

Result and Interpretation

From the Regression analysis Table 4.16 the p value of Risk Assessment, is less than 0.01(0.001<0.01), Null hypothesis is rejected at 1% and 5% level of significance. Thus, there is significant relationship between Risk Assessment and Credit Risk Management.

Hypothesis V

H_5: There is significant relationship between Risk Monitoring and Credit risk management

Result and Interpretation

From the Regression analysis Table 4.16 the p value of Risk Monitoring, is less than 0.01(0.000<0.01), Null hypothesis is rejected at 1% and 5% level of significance. Thus, there is significant relationship between Risk Monitoring and Credit Risk Management.

4.5 Discussion

Credit Risk management is one of the most important aspect of the financial institution management. There is however a certain procedure and techniques that is directly or indirectly followed in any organization for efficient credit management. Through previous research work and conceptual idea over the study, we have clearly realized that these process and procedure of loan portfolio management, Risk identification, Risk Analysis, Risk Assessment and Risk monitoring that helps to manage credit efficiently. Thus it is essential for organization to follow and maintain the credit risk management procedure for efficient and secure operation of the organization.

At present there have is frequent news highlight about cooperative being unable to manage their credit resulting in default of payment capacity of the borrowers deposit. This very situation is the basis for this research study. This research attempted to understand the cooperatives ability and awareness about credit risk management through effective and efficient follow of the credit risk management procedure. Through proper and detail analysis this research findings helps cooperative organization to understand various techniques and methods and further help to manage the credit risk efficiently and effectively. It even supports the wellbeing and growth of

individuals and communities associated with the cooperative by securing the credit and deposit of the people.

Initially, the research planned to investigate the credit risk situation of the cooperative organization through detail investigation of the annual report. And then understand the level of awareness in cooperative about the credit risk management procedure and techniques. This was later to be averaged and summarized in the detail data analyses chapter. Though the research initially planned to bring in light the credit situation status of the cooperative, as many cooperative were reluctant to share the financial report to an outsider this aspect was dropped and the next part of the research was carried out.

As second phase of the research we then attempted to understand the level of awareness about the various variables and if such techniques and processes for the successful implementation of the variable were in place. This study examined the credit risk management procedure such as loan portfolio management, Risk identification, Risk Analysis, Risk Assessment and Risk monitoring that helps to manage credit efficiently. For this, the research devised about 5-6 statements in each variable and level of awareness or inclination was checked.

The loan portfolio management question related to checking the organizations awareness about maintaining separate portfolio for loan. Here the research attempter understand the process and techniques followed by the organization while making portfolio, if there is sufficient fund allocated in the beginning of the year , if credit position are regularly evaluated , if various accounting and financing ratios and formulas are used to do it, and the organizations members' awareness on the topic, if credit department is influenced by the state of the economy, if loan portfolio management ensures quality of credit ,if it is a major part of credit risk management procedure. it was found that cooperative organizations though have proper awareness on the topic of loan portfolio management for credit risk management they don't exactly follow the technique of segregating the credit limit for the loan portfolio, considering quality and level of credit portfolio uses before imparting further credit on the sector, and using various accounting and financial ratios to evaluate and analyses the portfolio

The risk identification statement related to checking awareness on risk identification process and observing the techniques followed for proper risk identification. As part of

checking awareness respondents were inquired if Risk identification is a major part of Credit risk management, if it helps to develop risk management strategy and allocate resources accordingly, if credit managers majorly contribute to risk identifying of credit etc. As part of analysis of techniques utilized to understand the risk identification process statements like , if their cooperative relies on experts guidance and consultancy when approving and analyzing loan, if risk are segregated into different categories, if interview of borrower is done and if proper documentation if followed , were addressed to the respondents.. it was found that the respondents had awareness on the topic of risk identification and risk categorization however, not all respondents used interview of the borrower as a separate technique to identify the risk associated with credit. Similarly, not all cooperative consulted with the experts for guidance and direction when approaching a new creditor or project.

The risk analysis variable composited of 6 statements where similar to above variable there were statements to check the awareness and some statements to check the use of techniques associated with risk analysis. As part of awareness on risk analysis, statement line proper credit risk analysis helps develop strategies and allocate resources, it is a process of predicting outcome, and estimating the magnitude of consequences were directed. Similarly, as part of techniques followed, respondents were inquired if their organization followed SWOT analysis, consult anted with experts for guidance, and if the organization followed proper contingencies for analysis risk. it was found that here too the organization were aware about the Risk analysis however did not follow every techniques for risk analysis. Recognizable number organization don't follow SWOT analysis of the project from borrower or from their side on the loan .similarly, countable organization don't take expert guidance for risk analysis when imparting loan. Lastly, most organization either maintain physical collateral for large loans or ensure personal guaranteed from 2-3 old members for a loan. Where without the guaranteed loan being cleared the same guaranteed cannot be used for other or self-loan.

The fourth variable of the study was Risk Assessment. Here the research wanted to estimate the understanding and level of assessment of the borrower credit worthiness. So the inquiries like, credit assessment takes in consideration of the credit worthiness of the borrower, if the income regularity is taken in consideration, if previous repayment

schedule affects the loan approval chances this time, if collateral is taken in consideration, and if moral integrity of the borrower is investigated before disbursement of loan. Here, it was found that organization takes in consideration income of borrower, previous repayment schedule, credit worthiness and collateral (personal or physical) but apart few major cooperatives were slightly reluctant to investigate on the moral stand of the borrower in the neighboring shops and locality

Risk Monitoring is the final independent variable, where the research attempted to understand the awareness and techniques of cooperative in efficient and effective implication. Here as part of awareness test, the respondents were asked if Risk monitoring ensures effective control and response are in place. Other statement s related to use of techniques where respondents were asked if borrower's projects, transactions and use of credit for intended purpose were regularly evaluated and if there were proper training for detecting abnormalities. here, it was found that cooperative have proper knowledge of the credit risk monitoring and use of techniques however, most cooperative organization don't monitor the transaction of the borrower as part of credit risk monitoring process. Very few cooperative evaluate the inventory level, sales level etc of the borrower as credit risk monitoring.

As part of dependent variable, credit risk management is evaluated with 6 statements where statements are placed to evaluate the status of credit in the cooperative. Though credit status was supposed to be evaluated through secondary data, due to unavailability of much data these were evaluated through perception of the company respondents. Here, of all the statements related to credit risk management employees responded that employees are well aware about credit risk management, here cooperatives get sufficient guidelines and have been able to manage the risk appropriately for a long time. Cooperatives also follow up on loan as part of credit risk management. However, most cooperative suggested that they don't need training and assistance to manage the credit risk in organization. Here it was found that training has been sufficient in the past and at present the cooperative don't need training to lead manage the cooperative credit risk. Most cooperative suggested that their experience and instruction from inside management is sufficient to manage the cooperative credit risk.

Correlation analysis has been done in order to find out the relationship between credit risk management procedure and Credit risk management. The study shows that all five

variable namely loan portfolio management, Risk identification, Risk Analysis, Risk Assessment and Risk monitoring has positive correlation with Credit risk management.

Regression analysis has been done for hypothesis testing. Through hypothesis testing, it is found that, three variables from credit risk management procedure namely Risk Analysis, Risk Assessment and Risk monitoring have significant positive impact on Credit risk management. In contrast, Loan portfolio management despite of having positive correlation and Risk Identification despite though having negative no impact no measuring credit risk management were marked insignificant.

From the study, Loan portfolio management is marked as not significant in supporting for credit risk management. This is contradictory to previous research and findings in cooperative around the world. effective management of the loan portfolio and the credit function is fundamental to a Saving and credit Cooperatives's safety and soundness further loan portfolio management (LPM) is the process by which risks that are inherent in the credit process are managed and controlled (Richardson D. C., 2002). Contrary to this our study indicate that loan portfolio management is slightly less emphasized in our cooperative. The research discovered that cooperative instead of devising a definite and fixed amount in different sector of credit focus on fund allocation to any sector that come for credit.

Similarly, financial institution, big or small must focus on proper credit risk identification. In many research and books this has been highly emphasized upon. In 1984 Greene and Trieshmann stated that risk identification is the first stage of risk management. However, the findings don't exactly match with that our research. Here, we found that unlike in other cooperative our cooperative don't use various techniques of simple interview and proper consultancy and guidance with outsider before imparting credit .some of our cooperative seem to be doing business solely based on trust resulting in betrayal by its own members. This very idea can be seen in our society where, a single shop is a member of large number of cooperatives and so borrows credit from al. the borrower in the right time them disappears. Resulting in credit default due to improper risk identification. This is contradictory to many research done with larger sample and bigger perimeter like that of (William, Smith, & P.C.Young, 2000).

The study also revealed that majority agreed that risk analysis and assessment was a comprehensive risk measurement and mitigation method used for credit risk management. Strutt (2003) Stated that risk analysis included different analyses like establishing acceptable or tolerable levels of risk, evaluation of risks through SWOT analysis, determine whether the risks are as low as reasonably practicable, and determine risk reduction measures where appropriate. The study also revealed that majority believed that the major approaches used in risk analysis were preparation of contingency for risk failure, estimating magnitude of risk etc.

Eloff, Labuschagne, and Badenhorst, (1993) stated that active risk monitoring ensures that effective counter- measures to control risks are appropriately implemented. The results of implementing risk-reducing measures are evaluated to determine if the expectation that risk management reduces loss is met. Then, appropriate adjustments must be made so that the organization remains prepared against the exposure to risks. Thus, risk monitoring not only evaluates the performance of risk reducing measures but also serves as a continuing audit function. The research indicated that our cooperative in the sample study have proper knowledge about credit risk monitoring and thus evaluate the project status of the borrower, and use of fund for intended purpose etc.

The study revealed that most of the respondents agreed that effective credit risk management requires a reporting and review structure to ensure that risks are effectively identified and assessed and that appropriate controls and responses arc in place. This is similar to the work of Hendricks and Singhal 2005 who stated that regular audits of policy and standards compliance should be carried out and standards performance reviewed to identify opportunities for improvement. They continued that organizations are dynamic and operate in dynamic environments. Changes in the organization and the environment in which it operates must be identified and appropriate modifications made to systems. They added that the monitoring process should provide assurance that there are appropriate controls in place for the organization's activities and that the procedures are understood and followed.

CHAPTER 5

SUMMARY AND CONCLUSION

This chapter presents the overview of findings and conclusion of the study. Findings and the conclusion of the study is based upon the data analysis and hypothesis testing which was done in the previous chapter. The first section of this chapter includes summary of findings, second section includes conclusion and third section includes recommendations.

5.1 Major Findings of the Study

5.1.1 Respondent's Profile

- Among the total 147 organization sampled 4.8% organization were less than 1 years old, of the remaining 25.2% organization were told to be 5-0 years old and lastly 70.1% organization were said to be more than 10 years old
- Among the total 147 respondents there were male, 72% of total sample size. There were about 40.81% female representative in the sample
- Of the 147 responses received, there were least people from the age group of 20-25 with 7.5% and majority from the age group of more than 40 years with composition of 40.1. This was followed by age group of 30-35 and 35-40 with22.4% and 15.6%
- Of the total sample the total number of people said to have master's degree is 67 which represents 45.6% of the total sample. the number of people having Bachelor's degree is 65 which is 44.2% and the number of people having +2 level of educational qualification is 15 comprising of 10.2% of total respondents
- Of the total respondents of 147 credit managers comprises of about 41.5% of the total respondents. People in other categories were of 22.4% of the total respondent. Branch in charge and Extreme executives of the organization comprising of 19 and 31% of the respondents.
- Of 147 Respondents maximum people have more than 5 years of experience. It comprises of about 53.1% of the total respondent. This is followed by age

category of respondents of 2-5 years, 1-2 years and finally less than 1 year with composition of 23.1%, 14.3% and 9.5%.

- Of 147 respondents the study successfully included about 109 saving and credit cooperative and about 38 multi-purpose cooperative. It comprises of 74.1% and 25.9% saving and credit and multi-purpose cooperative
- Of the total respondents those that believed that level of reckless lending to be at about 0-5% comprises of 27 with 18.4% contribution. Similarly, almost equal number of respondents assume that the level of reckless lending is 5-10% or 10-15% constituting about 17% in each category. Finally least people assume that the level of reckless lending to be above 50%. It only represents about 4% maximum respondents believe the level of reckless lending to be 15-50% which comprises of about 40.8% of the respondents view
- Of 147 respondents maximum respondents have marked the waiting time to be about 3 months. It comprises of 88 cooperative of the study contributing 59.9 % in the study. About 32 and 3 organization of the study have marked the wait time to be so with contribution of 21.8% and 2% in the study. There were however, 24 cooperative in the study that had less than 3 month wait time to impart loan
- Of the total respondents maximum organization respond that they process loan in 6-8 and 3-5 days. This composites of 35.9% and 33.3% of the total responses. There are very few organization that required 12-14 and 15-17 days for processing of the loan. It composites of 10.9% and 8.2% of the total respondents .finally, only 3 organizations said that they need 18-20 and more than 21 days for processing of the document

5.1.2 Descriptive Statistics

- Here it was found that most respondents presented quite satisfied result in terms of variables Loan Portfolio management. Here in all the question related to Loan portfolio management the respondent have replied to the agreeable and upper limit such that the average of the whole response 3.99((3.86+3.40+4.67+4.20+3.388+4.435)/6). This suggests that most organizations agree to the idea that there is need of loan portfolio management.

- Similar to Loan Portfolio management. The Risk Identification also show similar result. As per this result there are most organization who strongly agree to the idea of risk identification being important for credit risk management. Here majority of the responses are strongly agreed. The average of all the responses is (4.52+4.229+4.52+3.67+4.19+3.68+4.54)/7) 4.19. This suggests that organizations strongly agree to idea of risk identification.
- Again moving to the descriptive analysis of Risk Analysis here there are few question to which respondents strongly agree and some agree and some neutral. This gives the mean of the data as 4.048 ((4.409 + 4.402+ + 4.437 + 2.96+4.14) / 5) .This suggests that respondents are strongly agree with the risk analysis part of credit risk management.
- Now in Risk Assessment. It was found out that the average of the overall study was in the range of 4.3. That means that the respondents only strongly agreed to the most statement in risk analysis. Here the average of the study related to the variable is ((4.59+4.63+4.39+4.40+3.75)/5 =4.375. This means that respondents are strongly agree to idea of risk assessment for credit risk management.
- Lastly in case of study of independent variables Risk monitoring most statements were highly agreed upon. That means to say that the average of the study resulted to ((4.528+4.48+4.36+2.99+4.3125)/4=)=4.137. It means that most respondents strongly agree to idea of proper monitoring for proper credit risk management.
- In case of dependent variable, Credit risk management respondents have consistent result. This gives out an average of 4.128. Which means to say that there are people mostly strongly agreeing to the presence of credit risk management in the organization.

5.1.3 Correlations

- The relationship between the credit risk management and Loan portfolio management show positive relation between them. In other words as the Loan Portfolio management increases the level of credit risk management also increases. In other words, with 1 percentage increase in effort towards loan portfolio management there is 0.647 increases in credit risk management.

- The relationship between the credit risk management and Risk Identification shown positive relation between them. In other words as the Risk identification increases the level of credit risk management also increases. In other words, with 1 percentage increase in efforts towards risk identification there is .0.651 increases in credit risk management.
- The relationship between the credit risk management and Risk analysis show positive relation between them. In other words, with 1 percentage increase in Risk Analysis there is 0.701 increases in credit risk management.
- The relationship between the credit risk management and Risk Assessment show positive relation between them. In other words, with 1 percentage increase in Risk Assessment there is 0.721 increases in credit risk management.
- The relationship between the credit risk management and Risk monitoring shown positive relation between them. In other words, with 1 percentage increase in risk monitoring there is .691 increases in credit risk management.

5.1.5 Coefficient

The study presented the impact relation of the credit risk management procedure on Credit risk management as $Y= 0.302+ 0.062X_1- 0.064X_2+ 0.294X_3+ 0.313X_4+ 0.313X_5+ e1$ where Y= CRM = Credit Risk Management, ,X_1 = L P = Loan Portfolio, , X_2 = R I = Risk Identification, X_3 = R A = Risk Analysis, X_4 =R S= Credit risk Assessment, X_5= R M = Credit Risk Monitoring

5.1.4 Hypothesis

There is significant relationship of risk analysis, risk assessment and risk monitoring with credit risk management. Brief summary of the hypothesis testing are as follows

H_1: There is no significant relationship between Loan portfolio management and credit risk management

H_2: There is no significant relationship between Risk identification and credit risk management

H_3: There is significant relationship between Risk analysis and credit risk management

H_4: There is significant relationship between Risk assessment and credit risk management

H_5: There is significant relationship between Risk monitoring and credit risk management

5.1.5 Cronbach's Coefficient Alpha

It was found that Cronbach's Alpha value is greater than 70% in sample pilot study which means that for all questionnaires for each of the filed indicates an excellent reliability of the entire questionnaire. The overall reliability of the study was more than 90% in both pilot test and sample study.

5.2 Conclusion

This study was guided by primary objective of measuring the impact of credit risk management procedure on credit risk management. Large number of research have been done under this topic in national and international level. However, this field of study has not been explored very well in the context of Nepal. Therefore, based on the major objectives, hypothesis were developed and research questions was made for this study.

This study has employed descriptive and cause and effect research design to deal with the fact- finding and searching adequate information associated with understanding the credit risk management in cooperative organization of Nepal. Here, the study tries to relate the if and to what extent cooperative use loan portfolio management , risk identification, risk analysis credit risk assessment and credit risk monitoring to regulate and manage the credit risk in the cooperative in Nepal . Primary data were collected through well-structured questionnaire designed in 5 point Likert scale. The population of this study were cooperatives operating in Nepal Convenience sampling method was used considering the covid pandemic lockdown and data were collected from 147 respondents.

For the data analysis purpose, both descriptive as well as inferential statistics were used to analyses the data. Frequencies, percentage, mean and standard deviation are used under descriptive statistics to describe the nature and characteristics of the data and

correlation as well as regression analysis are used under inferential statistics to draw the inference and hypothesis testing.

The study shows that five variable namely loan portfolio management, risk identification, risk analysis, risk assessment, and risk monitoring have positive correlation with credit risk management. Through hypothesis testing, it is found that, three variables Risk analysis, risk assessment and risk monitoring have significant positive impact on credit risk management. In contrast, loan portfolio management despite of having positive impact is marked insignificant and risk identification having negative impact is also marked insignificant.

The goal of this study was to impact the light on credit risk management procedure for credit risk management. This research helps to understand the level and impact of credit risk management procedure on credit risk management

5.3 Recommendations

This research aimed to understand the impact of credit risk management procedure on credit risk management of the cooperative of Nepal. Not much research have been done to understand and relate the identified variable on the credit risk management. However, this research is also suitably and efficiently performed in secondary data base. The secondary data based analysis is more fruitful and effective. That being said, the primary and secondary approach of the research combined could have been even more fruitful

The study helps to understand the level of awareness and gives basic idea about the simple techniques followed in the cooperative during the credit risk management procedure. More over the studies impact was not in the datas and presentation but during the data collection procedure where, information and trend from one organization for credit risk management was shared with another. For instance the later cooperatives were made aware that some expert cooperatives prefer to photo and document the inventory and sales level of the borrower to ensure his/her credibility to pay. Similarly, some cooperative also secretly inquire about the moral background of the borrower in and around neighborhood to ensure moral stand of the borrower. This sharing of information by a data collector was the most important part of the research

Apart that the study is helpful to cooperative, regulator and customers to understand the level of credit risk management. At present many cooperative organizations are aware and so take credit risk management as sensitive part of the operation of organization. However, not all cooperatives are fully aware about techniques and methods that best fit for cooperative credit risk management

According to literature review and the result of the study there are some primary direction for the future research. This study infer the impact of credit risk management procedure on credit risk management. As like other study, this study also have some limitations and drawbacks. Based on all the limitations, drawbacks and findings, this study recommends following points for further study and make this field more comprehensive.

- This study takes in consideration only cooperative sector, however, a comparative study of cooperative sector and other financial institution could have given a detail and proper indication about what is missing. Therefore, it is recommended to consider wider area of sector business in further study.
- Moreover many self-visited cooperative did not prefer to talk much about the credit situation in cooperative and so did not entertain the survey. Personally, it felt like cover-up for something wrong. Further the reluctance of the organization to provide the annual report, easily distributed in annual general meeting, indicated something fishy. so it is recommended to investigate the cooperatives credit situation on a regularly basis and discuss the matters properly to ensure no stigma toward the topic and matter
- This study takes in consideration the primary data only. Though the study initially aimed to take in reference both primary and secondary data, because the reports were not easily made available the research took in consideration only primary data.it is thus recommended to investigate cooperatives based on their secondary data.
- Response are taken based on convenience sampling method and most respondents are taken from Kathmandu. Therefore, it is recommended to consider respondents if possible evenly from all around Nepal and equally from every type of cooperative all over Nepal
- This study considers employees from cooperative sector. Though it was initially planned to interact with only credit managers and above the pandemic lockdown

forced to use collect data from anyone available in the organization. Similarly, phone calls were made and relationship based efforts were used to collect data from anyone associated in cooperative as organizer. It is recommended for further researcher to include professional people who have greater tenure and expertise largely.

Over the time period of the study the research not only identified some loops and cracks in the process of credit risk management operation of Cooperative organizations in Nepal but also identified some solution and way out for the cooperative organizations. Some of the solutions and way out for the problems suggested by respondents for credit risk management in cooperative organization of Nepal are thus indicated below.

- Legal way must be made simple to ascertain the payment of debt in case cooperatives suffer credit default. Often times promoters are well to do and can handle the default easily, however, legal provision of blocking the promoters assets to ensure payment of the creditors makes it difficult to settle the default. Government must thus, look for ways to support the cooperative and give promoters ways to settle the default loan to ensure safety of deposits.
- It is difficult for cooperative organizations to track debtors once they makes up the mind to run. So government must devise some way to track these defaulters.
- There is also a problem where, a single person collects credit from more than one cooperative organization. So many cooperative organizations suggested a single platform or database for all cooperatives to check the borrower's status with other cooperative. This ensures that no single borrower will apply for credit from many cooperative based on trust. This idea must be explored by the regulatory authority and proper database must be maintained accessible by all the cooperatives.

5.4 Future of Credit Risk Management

The future of credit risk management in cooperative seems bright. This study shows that cooperatives arte aware about the techniques and procedure despite not all following them by the book. Some cooperative have devised plan and strategies to investigate and tackle the credit risk. Association and member gathering ensures proper

sharing of information and training about different procedures and techniques of credit risk management in cooperative.

I personally hope, the information about procedure and way out different cooperative uses to manage credit risk in cooperative that I have shared over my data collection period have made slight impact on the awareness of credit risk management in cooperative

- There is time and resource constraint as the study has to be completed within limited timeframe.
- Very limited study has been done in this field in Nepal. So, this study is primarily based on limited secondary data.
- It is quantitative analysis and doesn't cover the qualitative analysis regarding how effective the study is.
- Variables are limited, which may lead to less consistency in finding the relationship as expected.

5.5 Suggestions for further studies

Scope of research is widened by constant inquiry and search on the matter. So Future studies also need to be carried out on different places. However, Research on the matter of credit risk awareness and management is still in infancy in Nepal and so needs further attention.

This study focused on the credit risk management procedure in cooperative in Nepal and the data and findings are depicted above. The findings suggests that cooperative are well aware about the credit risk management procedure but don't exactly follow he techniques and tools. So the research suggests further research to take in consideration the sample before collecting data and focus on comparative analysis of credit risk management of cooperative in relation to commercial banks and financial institutions. Moreover the future research should focus on study of variety of type of cooperative and understand the situation with mediating of the type of cooperative. This will help understand the situation of credit risk management procedure and awareness and if it's same in reference to type and size of cooperative.

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ANNEX I

QUESTIONNAIRE

Credit Risk Management in Co-Operative Organizations in Nepal: A study of risk management procedure awareness

Dear Respondents,

I have been conducting a survey on "Credit Risk Management in Co-Operative Organizations in Nepal: A study of risk management procedure awareness" particularly among the cooperative organization in Nepal who are involved in credit lending activity in the economy. This study has been being conducted under the supervision of my respected teacher.

This survey is not a test, but attempts to uncover the opinion of professionals. It takes about 10 to 12 minutes to complete. Read the instructions carefully. I would like to ensure that your responses would be used only at the aggregate level and kept confidential at the individual level.

Thank you for participation.

Pratik N Panta

Student of MBA

Apex College

Kathmandu

1. Gender: Male ( ) Female ( )

2. Age

25-34 years ( ) 35-44 years ( ) 45 - 54 years ( ) 55 - 64 years ( ) 65 years and above ( )

3. What is your highest qualification achieved?

Diploma ( ) Degree ( ) Masters ( ) others (please specify.....)

4. What is your current designation within the cooperative?

Credit Manager ( ) Branch Manager ( ) Managing Director ( )
others (please specify.……)

5. How many years have you been in the cooperative?

1 - 5 years ( ) 6-10 years ( ) 11 - 15 years ( ) 16-20 years ( )
21 years and above ( )

6. Types of Credit Advanced

…….saving and credit ……..multi-purpose cooperative
…….. Agricultural cooperative

7. What is your view about level of reckless lending in present in cooperative organization (reckless lending is related to lending to creditors without much scenario evaluation, document processing, and because of nepotism, favoritism or other circumstances)

……0-5% ……..5-10% ……..10-15% ……15-50%
……..above 50%

8. In your opinion what are the Factors Leading to Reckless Lending

- Influence from outside forces (outsiders influences and coercion)
- Inside dealing with management and high authorities
- Related parties forgery and fabrication of credit need and prospect

- High pressure on organization to maintain reputation , resulting no rejection to creditors/ borrowers
- Lack of credit risk management knowledge to employee and staffs
- High pressure in financial market to lend for survival
- Non Implementation of lending policy directed by governing bodies
- Highly untrained staff
- Absence of strict Governing Body

9. How long does it take in your organization for credit processing (in days)

- 3-5
- 6-8
- 9-11
- 12-14
- 15-17
- 18-20
- 21 & over

10. What is the Minimum Conditions for being a credit Member in the organization (For borrowing from the organization?)

- Be literate
- Not holding any political post
- At least twenty years old
- Regular earning capacity
- Must be member of the cooperative group

Likert Scale: A Likert Scale is a type of rating scale used to measure attitudes or opinions. With this scale, respondents are asked to rate items on a level of agreement.

Strongly Agree - 5 Agree - 4 Neutral-3 Disagree – 2 Strongly Disagree – 1

Loan Portfolio Management						
S.N	Particular	1	2	3	4	5
LP1	Our organization allocates sufficient fund in different loan portfolio in the beginning of the year					
LP2	To ensure diversification of loan, our cooperative takes in consideration credit position on various loan portfolio					
LP3	Our cooperative's loan approval on various portfolio is influenced by state of economy (recession, normal, boom, liquidity crisis, liquidity surplus etc).					
LP4	Loan portfolio management system results in a periodic and timely study of quality of credit in different categories.					
LP5	Our organization uses various credit and accounting ratios to maintain proper balance in the loan portfolio.					
LP6	Loan portfolio management is a major part of credit risk management.					

Credit Risk Identification						
S.N	Particular	1	2	3	4	5
RI1	Risk identification is a major part of credit risk management.					
RI2	Credit risk identification helps management to develop risk management strategy to diverse and allocate resources.					
RI3	Credit managers majorly contributes to identify the risk in the credit activity					

RI4	Our cooperative relies on references and guidance from senior management and BFIS expert's in risk identification process.					
RI5	Our cooperative segregates risk in different categories and avoids unwanted risk through proper risk identification process.					
RI6	Our cooperative use interviewing technique to identify Risk in from borrowers when identifying Credit risk.					
RI7	To facilitate credit risk identification a substantial degree of standardization of process and documentation is required.					

Credit Risk Analysis						
S.N	Particular	1	2	3	4	5
RA1	Analysis of risk helps credit department to develop risk management strategy and hence better allocation of resources					
RA2	Credit Risk analysis is the process of predicting and forecasting the outcome of credit					
RA3	Risk analysis involves estimating the magnitude of the consequences					
RA4	Our cooperative requires SWOT analysis of project from borrower as part of Risk Analysis.					
RA5	Our cooperative takes consultation and guidance from experts as part of our credit risk analysis					

RA6	Our organization prepares contingency of dispersed loan as credit risk analysis method.					

Credit Risk Assessment						
S.N	Particular	1	2	3	4	5
RS1	Our cooperative reviews borrowers income before providing credit					
RS2	Credit risk Assessment ensures efficient credit worthiness of borrowers					
RS3	Our organization takes in consideration past repayment records of borrower before approving credit.					
RS4	Our organization takes in consideration financial integrity (collateral security, personal guarantee) of borrower before granting loan.					
RS5	Our organization inquires about moral integrity of borrower before granting loan.					

Risk Monitoring						
S.N	Particular	1	2	3	4	5
RM1	Our cooperative regularly reviews borrowers project status after credit dispersion					
RM2	Risk monitoring ensures that appropriate controls and responses are in place.					

RM3	our organization have proper training to detect abnormalities at an early stage					
RM4	Transactions of the borrowers are evaluated as part of Risk monitoring on regular basis.					
RM5	Our cooperative monitors the use of credit by borrowers (if the fund is used in intended purpose)					

Credit risk management						
S.N	Particular	1	2	3	4	5
CRM1	Employees in our organization are well aware about the need of credit risk management in our business					
CRM2	There are sufficient tools and guidelines in our organization to manage credit risk					
CRM2	Our organization have been able to successfully manage credit risk for long time					
CRM3	Our organization follows every policy and guidelines marked by our regulators in management of the credit risk					
CRM4	Our cooperative regularly emphasizes on credit follow up as part of credit risk management					
CRM5	Our employees need regular and timely training and assistant to manage credit risk in the organization					