

**YANGON UNIVERSITY OF ECONOMICS**  
**DEPARTMENT OF MANAGEMENT STUDIES**  
**MBA PROGRAMME**

**DETERMINANTS OF CREDIT RISK MANAGEMENT AND  
PERFORMANCE OF A BANK**

**SAN SAN HTAY**

**EMBA II – 19**

**EMBA 20<sup>th</sup> BATCH (ONLINE)**

**JUNE, 2025**

**YANGON UNIVERSITY OF ECONOMICS**  
**DEPARTMENT OF MANAGEMENT STUDIES**  
**MBA PROGRAMME**

**DETERMINANTS OF CREDIT RISK MANAGEMENT AND  
PERFORMANCE OF A BANK**

**ACADEMIC YEAR (2023- 2025)**

**Supervised by:**

Dr. Thin Nwe Oo  
Professor and Head  
Department of Management Studies  
Yangon University of Economics

**Submitted by:**

San San Htay  
EMBA II- 19  
EMBA 20<sup>th</sup> Batch (Online)  
2023 - 2025

**YANGON UNIVERSITY OF ECONOMICS**  
**DEPARTMENT OF MANAGEMENT STUDIES**  
**MBA PROGRAMME**

**DETERMINANTS OF CREDIT RISK MANAGEMENT AND  
PERFORMANCE OF A BANK**

This thesis is submitted to the Board of Examiners in partial fulfillment of the requirements for the degree of Master of Business Administration (MBA).

**Supervised by:**

Dr. Thin Nwe Oo  
Professor and Head  
Department of Management Studies  
Yangon University of Economics

**Submitted by:**

San San Htay  
EMBA II- 19  
EMBA 20<sup>th</sup> Batch (Online)  
2023 - 2025

## ACCEPTANCE

This is to certify that the thesis entitled “**Determinants of Credit Risk Management and Performance A Bank**” has been accepted by the Examination Board for awarding a Master of Business Administration (MBA) degree.

### Board of Examiners

-----

(Chairman)

**Dr. Tin Tin Htwe**

**Rector**

**Yangon University of Economics**

-----

(Supervisor)

-----

(Examiner)

-----

(Examiner)

-----

(Examiner)

-----

(Examiner)

-----

(Examiner)

-----

(Examiner)

**JUNE, 2025**

## **ABSTRACT**

This study aims to analyze the effect of determinants of credit risk management on credit risk management and to analyze the effect of credit risk management on performance of A Bank. Both primary and secondary data are applied in the study. The loan department of A Bank has 300 employees in 2025 and the sample size is 169 using Raosoft sample size calculator. A simple random sampling method is utilized to select the respondents. For primary data collection, online survey method is applied. For secondary data, it is collected from previous research paper, related text books and relevant website, journals and policy of A Bank. Descriptive statistics and regression analysis are used to analyze the data. The finding indicates that environmental risk, credit appraisal measurement and market risk analysis have significant and positive effect on credit risk management of A Bank. It is also found that credit risk management has significant and positive effect on performance of A Bank. Based on this finding, A Bank should focus on credit risk management to reduce determinants of credit risk management and improve performance of A Bank.

## ACKNOWLEDGEMENTS

First and foremost, I extend my profound gratitude to Dr. Tin Tin Htwe, Rector of Yangon University of Economics, whose unwavering support, and profound wisdom have continuously illuminated and guided her students.

My heartfelt appreciation goes to Dr. Thin Nwe Oo, a distinguished Professor and Head of the Department of Management Studies at Yangon University of Economics. Her invaluable advice and unwavering enthusiasm throughout the preparation of this thesis have been indispensable. Without her meticulous supervision and patient support, the completion of this paper would not have been possible.

Furthermore, I am deeply grateful to Professor Dr. Hla Hla Mon, Professor, Dr. Than Thu Zar, Professor Dr. Khin Thet Htwe, Professor Dr. Myint Myint May, Associate Professor Dr. Kay Thi Soe, Associate Professor Dr. May Win Kyaw, and all other esteemed teachers from the Department of Management Studies at Yangon University of Economics. Their insightful lectures, constructive suggestions, and thoughtful comments have significantly enriched the content and quality of this thesis.

Furthermore, it is a greatest thanks to all respondents to my questioners for my study. I really appreciate for their kind favor of passionate participation on my study and their valuable times giving to me.

And finally, last but by no means least, let me take a chance my very special gratitude and thanks to my family, my working colleagues and also to every classmate from EMBA 20<sup>th</sup> Batch (Online) for their sharing knowledge and encouragements for these two years period of studying.

# TABLE OF CONTENTS

	<b>Page</b>
<b>ABSTRACT</b>	<b>i</b>
<b>ACKNOWLEDGEMENTS</b>	<b>ii</b>
<b>TABLE OF CONTENTS</b>	<b>iii</b>
<b>LIST OF TABLES</b>	<b>v</b>
<b>LIST OF FIGURES</b>	<b>vi</b>
<b>LIST OF ABBREVIATIONS</b>	<b>vii</b>
<b>CHAPTER 1 INTRODUCTION</b>	<b>1</b>
1.1 Rationale of the Study	3
1.2 Objectives of the Study	5
1.3 Scope and Method of the Study	5
1.4 Organization of the Study	6
<b>CHAPTER 2 THEORETICAL BACKGROUND</b>	<b>7</b>
2.1 Determinants of Credit Risk Management	7
2.2 Credit Risk Management	12
2.3 Performance of Commercial Bank	13
2.4 Previous Study	15
2.5 Conceptual Framework of the Study	16
<b>CHAPTER 3 PROFILE AND DETERMINANTS OF CREDIT RISK MANAGEMENT OF A BANK</b>	<b>17</b>
3.1 Profile of A Bank	17
3.2 Organization Structure of A Bank	19
3.3 Determinants of Credit Risk Management at A Bank	28
3.4 Demographic Profile of Respondents	35

3.5	Reliability Analysis	38
<b>CHAPTER 4</b>	<b>ANALYSIS ON THE EFFECT OF DETERMINANTS OF CREDIT RISK MANAGEMENT ON PERFORMANCE OF A BANK</b>	<b>40</b>
4.1	Employee Perception on Determinants of Credit Risk Management, Credit Risk Management and Performance of A Bank	40
4.2	Analysis on the Effect of Determinants of Credit Risk Management on Credit Risk Management at A Bank	47
4.3	Analysis on the Effect of Credit Risk Management on Performance of A Bank	49
<b>CHAPTER 5</b>	<b>CONCLUSION</b>	<b>52</b>
5.1	Findings and Discussions	52
5.2	Suggestions and Recommendations	55
5.3	Needs for Further Research	57
 <b>REFERENCES</b>		
 <b>APPENDIX-A</b>		
 <b>APPENDIX-B</b>		

## LIST OF TABLES

<b>Table No.</b>	<b>Particular</b>	<b>Page</b>
Table 3.1	Demographic Profile of Respondents	36
Table 3.2	Value Level of Reliability Cronbach's Alpha	38
Table 3.3	Reliability Analysis	39
Table 4.1	Environmental Risk	41
Table 4.2	Credit Appraisal Measurement	42
Table 4.3	Market Risk Analysis	44
Table 4.4	Credit Risk Management	45
Table 4.5	Performance of Commercial Bank	46
Table 4.6	Effect of Determinants of Credit Risk Management on Credit Risk Management of A Bank	48
Table 4.7	Effect of Credit Risk Management on Performance of A Bank	50

## LIST OF FIGURES

<b>Figure No.</b>	<b>Particular</b>	<b>Page</b>
Figure 2.1	Conceptual Framework of Bhatt et al.	15
Figure 2.2	Conceptual Framework of the Study	16
Figure 3.1	Organization Chart of A Bank	21

## **LIST OF ABBREVIATIONS**

A Bank	Ayeyarwaddy Farmers Development Bank.
AML	Anti-Money Laundering
ATM	Automatic Teller Machine
CCAO	Chief Corporate Affairs Officer
CCO	Chief Compliance Officer
CCO	Chief Credit Officer
CDOO	Chief Digital Operating Officer
CEO	Chief Executive Officer
C-Levels	Chief Levels
COO	Chief Operating Officer
CTO	Chief Technology Officer
Dy. CEO	Deputy Chief Executive Officer
Dy. CBO	Deputy Chief Business Officer
Dy. CFO	Deputy Chief Financial Officer
FAQ	Frequently Asked Questions
FX	Foreign Exchange
HOD	Head of Department
HR	Human Resource
ICT	Information and Communication Technology
KYC	Know Your Customer
SME	Small and Medium Enterprise

# CHAPTER 1

## INTRODUCTION

The banking industry plays a major role in keeping the economy running by providing loans, managing deposits, and supporting business activities. One of the main ways banks earn money is by lending, but this also brings one of the biggest risks they face credit risk. Banks are highly dependent on loan interest revenue as depository institutions, making them particularly sensitive to the pandemic's effects on the economy (Saleem et al., 2021). Credit risk management (CRM) is a foundational pillar in the modern banking system, playing a critical role in safeguarding the financial stability and long-term viability of banks. The possibility of borrower default can threaten not only a bank's balance sheet but also its reputation and systemic stability (Greuning & Bratanovic, 2009). This becomes even more critical in rapidly evolving financial systems where institutional safeguards are still maturing (Bessis, 2015).

Environmental risk refers to the potential adverse financial effect on a bank's loan portfolio arising from environmental events or conditions that impair a borrower's ability to repay (IFC, 2021). Acceptance of environmental risk management techniques and procedures have become important items for financial institutions in recent years, driven by increased awareness of environmental issues among customers and shareholders and by increasingly stringent liability legislation as a result of societal pressure (Liu et al., 2020). Investors and businesses are becoming increasingly aware of the numerous ways in which environmental concerns influence their operations, posing both obstacles and possibilities (Finger et al., 2018). Client responses and other environmentally motivated activities pose major no regulatory hazards to a company's markets and financial health (Das et al., 2022). However, if they have taken ownership of the polluted or pollution-causing property as a result of achieving security, they are in danger of direct lender responsibility for clean-up expenses or damages (Nizam et al., 2019).

Credit appraisal measurement is defined as comprehensive evaluation of a borrower's financial ability and willingness to repay debt, typically through standardized procedures that assess both quantitative and qualitative data (Greuning & Bratanovic, 2009). Appraisal also involves evaluating the value and liquidity of collateral, which provides lenders with recourse in case of borrower default (Altman & Saunders, 1998).

Credit appraisal is the systematic assessment of a borrower's creditworthiness, based on a range of financial and qualitative indicators (Greuning & Bratanovic, 2009). In many emerging economies, a key challenge in credit appraisal is the lack of reliable financial data, particularly from small and medium-sized enterprises (SMEs) and informal borrowers (Beck & Demirgüç-Kunt, 2006). Artificial intelligence and machine learning technologies are increasingly used to process this data and generate predictive credit scores (Frost et al., 2019). These tools can identify risk patterns and borrower behavior more accurately than traditional models. Risk-based pricing models are being introduced to match loan terms with the borrower's risk profile (Altman et al., 2008).

Market risk analysis refers to the potential for financial loss due to changes in external economic factors such as interest rates, exchange rates, inflation, and commodity prices (Jorion, 2007). In 1993, the Basel Committee on Banking Supervision (BCSC) stressed the significance of market risk. According to the BCSC, market risk is related to fluctuations in market pricing (including interest rates, currency rates, and stock values) (Ab-Hamid et al., 2017). Potential losses may be faced as a result of sudden changes in financial instruments such as exchange rate, Interest rate spikes can increase debt servicing costs, leading to a higher probability of defaults, especially for floating-rate loans (Bessis, 2015).

Credit risk management is defined as the process through which financial institutions identify, assess, monitor, and control the risk of borrower default to safeguard the bank's financial health (Bessis, 2015). It encompasses activities such as credit evaluation, setting exposure limits, implementing risk grading systems, and monitoring portfolio health Credit risk management (CRM) is a critical function in banking that ensures loans are issued and monitored in a way that minimizes default risk and supports financial stability (Saunders & Allen, 2010). Effective CRM practices contribute to a bank's ability to maintain asset quality, meet capital adequacy requirements, and generate consistent returns (Greuning & Bratanovic, 2009).

Bank performance is defined as the financial and operational outcomes that reflect how efficiently a bank achieves its strategic goals, commonly evaluated through indicators such as return on assets (ROA), return on equity (ROE), net interest margin, and the non-performing loan (NPL) ratio (Greuning & Bratanovic, 2009). Integrating environmental, market, and credit appraisal risks into the CRM framework enhances its comprehensiveness. Internal credit rating systems and portfolio-level risk aggregation help banks allocate capital strategically (Altman et al., 2008). CRM frameworks typically

include risk identification, assessment, mitigation, and monitoring (Basel Committee on Banking Supervision, 2011). Internal credit rating systems and portfolio-level risk aggregation help banks allocate capital strategically (Altman et al., 2008). Strong governance, including oversight by credit committees and clear credit policies, underpins CRM success (Laeven & Levine, 2009).

There are 4 state-owned banks and 27 private sector banks along with 13 branches of foreign banks. However, banks in Myanmar have limited ability for deposit mobilization and lending and so, banking institutions can experience competition (The World Bank, 2022). A Bank was established on 3<sup>rd</sup> December 2014 and is also known as Ayeyarwaddy Farmers Development Bank. It is one of the private banks in Myanmar and currently, it has 50 branches operating across Myanmar. A Bank aims to provide essential banking services such as deposits, withdrawals, cash handling, teller services, and ATM access. For retail and SME clients, A Bank offers a variety of products including current and savings accounts, loan & overdraft services, and convenient interbank transfer options.

This study aims to explore the effect of determinants of credit risk management on credit risk management and performance of A Bank. By focusing key factors such as environmental risk, credit appraisal measurement, and market risk analysis, A Bank can enable to strength credit risk management and to achieve improving performance of A Bank.

## **1.1 Rationale of the Study**

Although banking industries are well-established in developed countries, the banking sector of Myanmar is still in the formation phase. Myanmar has 44 licensed banking institutions, and they include state-owned, private, and foreign banks though the country still relies heavily on informal financial systems. Informal lenders consist of money lenders, shop owners, and agricultural input suppliers and they provide 75% of the credit in Myanmar (World Bank, 2022). At the same time, around 74% of the population which is about 40 million people are unbanked and lack access to formal financial services (Baker, 2023).

The performance of a commercial bank is directly linked to the effectiveness of its credit risk management (CRM) practices. In developing economies like Myanmar where financial systems are volatile and regulatory structures are still in development stage, the

ability of banks to manage credit risk significantly influences overall performance of the bank. Credit risk can lead to non-performing loans. For A Bank, which operates in sectors that are highly exposed to seasonal, environmental, and market risks, having a strong CRM system is a vital part of the organization.

In this competitive and underserved industry, banks like A Bank play a critical role in extending financial access to rural and agricultural communities. However, to remain competitive and financially sustainable, A Bank must strengthen its core risk management functions, particularly credit risk management (CRM). The ability of A Bank in managing credit risk is vital to its operational success. Agriculture which is the primary sector served by A Bank is likely to be impacted by environmental shocks, seasonal income patterns, and market volatility. These risks make lending more uncertain and increase the probability of borrower default. A Bank needs to adopt robust and suitable CRM strategies within key areas of environmental risk, credit appraisal measurements, and market risk analysis.

Environmental risk, credit appraisal measurement, and market risk analysis are key dimensions of the CRM process. Environmental risk plays a crucial role in shaping the financial behavior and creditworthiness of rural borrowers, especially those involved in agriculture. Floods, droughts, and unpredictable weather patterns can destroy livelihoods and cause borrowers unable to meet their repayment commitments.

Credit appraisal measurement are the foundation in making lending decisions. For A Bank, which frequently lends to informal-sector clients with limited documentation, ensuring strong appraisal techniques is important. Effective CAM processes reduce adverse selection and moral hazard by evaluating borrower credibility through financial analysis, character assessment, collateral evaluation, and historical behavior. When implemented properly, CAM minimizes the risk of default, ensures that loans are issued with effective risk management which enhances CRM.

Market risk analysis is another important component in the CRM framework. Economic environment of Myanmar is characterized by high inflation rates, volatile currency exchange rate, and fluctuating interest rates and they can influence the repayment ability of borrowers and the financial performance of banks. A strong market risk analysis enables A Bank to anticipate external economic pressures and modify its lending strategies

accordingly. By combining these dimensions into credit risk management, the bank can more accurately assess potential exposures and strengthen its loan portfolio.

Despite the clear importance of CRM, there is limited research on how credit risk is managed in A Bank. Most existing studies focus on more advanced economies and they may not fully reflect the challenges existing in Myanmar for the banking institutions. By doing this research, it can offer new and practical insights not only for A Bank but also for other institutions operating in similar high-risk and underdeveloped financial environments. By understanding the relationship between CRM and bank performance, A Bank can enhance its human and technical capacity for risk management which will enable the bank to develop more resilient loan portfolios, and ultimately contribute to rural development and financial inclusion in Myanmar. Strengthening CRM is a strategic necessity that enables banks like A Bank to survive and grow in volatile environments and support sustainable national economic growth.

## **1.2 Objectives of the Study**

The objectives of the study are as follows:

1. To analyze the effect of determinants of credit risk management on credit risk management at A Bank, and
2. To analyze the effect of credit risk management on performance of A Bank.

## **1.3 Scope and Method of the Study**

This study focuses mainly on the 300 employees from Loan Department of A Bank (2025). The sample size is 169 employees out of 300 employees by using Raosoft sample size calculator. The simple random sampling method is applied to select 169 employees out of 300 employees in this study.

Online survey method is used to collect primary data by using email from employees of Loan Department at A Bank and the respondents are asked regarding with environmental risk, credit appraisal measurement and market risk analysis on credit risk management and performance of A Bank by using structured questionnaires with five point Likert scale. Secondary data is collected from previous research paper, related text books and relevant website and journals. For data analysis, both descriptive statistics and linear regression analysis are used.

#### **1.4 Organization of the Study**

This study consists of five chapters. Chapter one is the introduction of the study. It includes rationale of the study, objectives of the study, scope and method of the study and organization of the study. Chapter two presents relevant theories and determinants of credit risk management such as environmental risk, credit risk measurement, market risk analysis and credit risk management and bank performance, previous studies and conceptual framework of the study. Chapter three consists of profile of A Bank, determinants of credit risk management, demographic profile of respondents and reliability analysis. Chapter four presents analysis on environmental risk, credit appraisal measurement and market risk analysis, credit risk management and performance of A Bank. Chapter five is the conclusion of the study which includes findings and discussions, suggestions and recommendations and needs of further research.

## **CHAPTER 2**

### **THEORETICAL BACKGROUND**

In this chapter, theoretical background of the study is presented. This section covers credit risk management and its dimensions which are environmental risk, credit appraisal measurements and market risk analysis. Performance of commercial banks is highlighted. Previous study is also discussed in order to developed the conceptual framework of the study.

#### **2.1 Determinants of Credit Risk Management**

Credit risk management is defined as the effective management of credit risk which is the risk of borrower default, causing the financial institutions to suffer from financial losses (Ugah , 2020). Efficient credit risk management includes reliable credit granting procedures, appropriate credit administration, measuring, monitoring and controlling credit risk, scope and allocation of related policies and strategies and the method of credit portfolio management (Bank for International Settlements, 1999). Components of credit risk management systems consist of credit rating methods, the possibility of adverse events and the losses that result from from these events (Caouette et al., 1998). The determinants of credit risk management including environmental risk, credit appraisal measurements and market risk analysis are discussed (Bhatt et al., 2023).

##### **2.1.1 Environmental Risk**

Environmental risk is defined as the risks that impact the firms and includes environmental policy changes, resource scarcity or climate events (Battiston et al., 2017). It is the threats towards the humans or nature that are created by the nature or man-made (Breitenstein et al., 2021). Environmental risk can be divided into two categories which are physical risk and transition risk. Physical risk refers to the environmental effects on operations of the organization like the workforce, infrastructure, raw materials, markets and assets. Transition risk refers to the effect of the transitioning to sustainability as in new

technologies, policy changes, and consumer preference changes (Ahmad et al., 2021). Environmental risk is related with credit default risk of an organization. Organizations that prioritize environmental risk has less regulatory risk as in being fined for environmental misconduct. Organizations that do not consider effective environmental risks management can experience stakeholder and reputational risks. And those who are involved in environmental issues have high financial risks and high event risks (Höck et al., 2020). Thus, the development of environmental credit risk management needs to be integrated into credit rating process of the risk management process of the banks. Effective environmental risk management is beneficial for banks, business borrowers and environmental agencies (Bhatt et al., 2023).

Environmental risk management techniques and procedures have been critical for financial institutions due to increased scrutiny of environmental issues by customers and shareholders in addition to increased laws and regulations which are a result of pressure from the society (Liu et al., 2020). Environmental factors impact and influence the operations of the institutions both in positive and negative ways. Environmental concerns lead to corporate risks and hazards which need to be managed properly and effectively (Scholtens & Klooster, 2019). Financial institutions can be subjected to responsibility and accountability towards damages or clean-up expenses due to the environmental difficulties produced by the borrowers, which can have negative impacts on the market and financial health of the financial institutions (Xi et al., 2022). When the borrowers participate in activities that can result in negative environmental impacts which then result in financial penalties that affect the expenses and income, banks are also exposed to environmental risks indirectly as the repayment capacity of the borrowers has been reduced. The banks also suffer from negative image as it may seem being supportive towards the borrowers that are engaging in environmentally harmful activities (Coulson & Dixon, 1995). Environmental risk management can increase environmental and economic returns as the lending process of the banks with environmental considerations provides green investment opportunities for borrowers, leading to investment in pollution reduction strategies to be able to access the financing from the banks (Liu et al., 2020).

Environmental risk is associated with credit risk as they increase the likelihood of the borrower default, and risk management processes of the banks require the incorporation of standardized environmental risk assessment techniques in their credit rating process

(Bhatt et al., 2023). Environmental risk impacts the credit portfolios of the banks negatively as it decreases the capability of the households and businesses to repay their loans. Banks are exposed to financial risks due to acute or chronic physical environment events and also risk transition (Cambridge Centre for Sustainable Finance, 2016). The ability of the bank to be able to effectively manage environmental risk depends on factors including geographic concentration, exposure to agricultural sector, capitalization level and rigidity, size of the bank and the availability of soft information (Caselli & Migliorelli, 2024). Financing projects with environmental concerns increases environmental and economic returns (Scholtens, 2006).

### **2.1.2 Credit Appraisal Measurement**

Credit appraisal measurement is defined as the assessment of the credit worthiness of the borrower by the lender and encompasses the consideration of various factors including character, collateral, repayment capacity, income, dependent number, monthly expenditure, employment history, years of service and other factors that affect the credit rating of the borrower (Kithinji, 2010). Credit appraisal is one of the core elements of a strong portfolio of the bank which focuses on gathering, processing, and analyzing valuable information in order to ensure the customers have creditworthiness and to reduce incentive problems of the lenders and borrowers (Thisika & Muturi, 2017). Most of the loans are backed by collateral though the majority of banks are interested in the repaid loan amount and loan interest. Hence, the banks ensure that the cash flows of the borrowers are sufficient to cover the timely payment of the loan principal and the interest through the process of appraising the creditworthiness of the potential borrowers. Credit risk is a type of risk related to the failure to repay the credit borrowed by the customers from the bank. In order to mitigate the risk, the credibility of the customer needs to be appraised through measuring the financial condition and their ability to repay the loans (Aman, 2019).

Credit appraisal management is at the core of the decision-making process when lending loans to the borrowers (Misati & Kamau, 2015). The purpose of credit evaluation concerns with deciding in accepting and rejecting of the credit proposition. It includes evaluating the ability of the borrower in repaying the loan on the applied loans. When assessing the ability of the borrower in repaying the loan, the credit-worthiness as well as the future anticipated cash flows of the borrowers are evaluated against the associated risk

level of that borrower. (Ndero et al., 2019). When considering the loan appraisal, the criteria of the ability of the borrower to repay the loan, the size of the loan, the purpose of the loan application, and the security should be considered. When there is insufficient loan appraisal process, banks face the cases of nonperforming loans as a result (Coulson & Dixon, 1995). Lack of effective appraisal measurement leads to negative impacts to the banks, depositors and the investors. Effective credit risk evaluation systems have the possibility to increase the profits of commercial banks by avoiding the probability of nonperforming loans (Chavan & Gambacorta, 2016).

Various risk assessments that can affect the loan repayment is credit appraisal which can be either simple or elaborate. Credit appraisal methods are categorized into two groups which are qualitative and quantitative (Saunders & Cornett, 2017). The appraisal aspects include income, lifestyle, existing liabilities, and appraisal of technical, commercial, marketing, financial and managerial aspects (Catherine, 2020). The credit assessment process is based on the policies, procedures and directives of the bank.

The growth and financial performance of the commercial banks depend on the degree to which the financial related transactions are conducted with trust, confidence and little risk. In order to have trustworthy and secure financial transactions, reliable and stable loan appraisal processes are required to analyze the loan applications before granting the loans. The applicants are expected to have contributed their own assets into the business before applying the loans (Noory et al., 2021). Strong credit appraisal leads to effective management of credit risk and offers a competitive advantage to the organization. It also influences the survival and profitability of a bank (Ndyagyenda, 2020). Proper credit assessment methods and monitoring can minimize loan loss probability (Aman, 2019).

### **2.1.3 Market Risk Analysis**

Market risk analysis is defined as the process of identifying, evaluating, monitoring, controlling and reporting of market risks (Tao, 2024). Commercial banks experience broad and narrow market risks. In the narrow sense, the market risks faced by commercial banks include interest rates, exchange rates, commodity price risk and equity risk. In the broad sense, the market risks include the loss of the proprietary business of the bank, the credit risk in the failure to fulfill the agreement by the counterparty and the credit risk of the bond

investment by the bank (Xue, 2019). Market risk experienced by commercial banks is sudden and uncertain. Market risks are the risks related to changing market conditions and include balance sheet results, managed accounts, derivatives and option price fluctuations (Hanh et al., 2021).

The prices and interests of the assets are influenced by extreme volatility of the market. Macroeconomic factors that influence the securities prices also impact financial markets. Market risk analysis measures are reliable as they consider changes in future income while also providing direction on interest rate risk as well as the market risk capital rules for bank holding companies and state member banks that can experience significant market risk exposure (Hanh et al., 2021). Market risk affects the performance of financial markets and an investor experiences losses from these factors affecting the performance of financial markets where the investments are made (Deng & Landicho, 2024).

When the financial institutions are involved in high commerce activities, they are weak against extreme market fluctuations, exposing them to market risk (Aruwa & Musa, 2014). Market risk influences long-term and short-term performance of the banking institutions. When the market risk of the banks increases, the profitability of the banking institutions decreases (Muriithi et al., 2016). Factors like financial leverage, foreign interest rates and exposure to these factors also affect the profitability of the banks. Market risk factors affect the financial performance of the banks negatively and they reduce the financial performance of the banking institutions, especially during financial crisis. Effective market risk management strategies are required to assist in reducing the potential negative effects and ensuring that the banks have financial stability and overall profitability (Yousef et al., 2023).

Market risk due to sudden changes in financial instruments as in exchange rates, commodity prices and other instruments with open market value leads to potential losses for the banks. The events result in lower earnings or valuation for the banks, creating financial losses (Christoffersen, 2011). Since financial instruments of the banks are related to each other, the loss in one bank can lead to subsequent losses in other banks, affecting the tranquility of the industry. Hence, market risk management is regarded as one of the top priorities of the banks due to the nature of the fragility (Ab-Hamid et al., 2021). Hedging, buying and selling of assets and liabilities, decreasing real interest income of commercial banks, launching of many short-term financial products cause market risk (Li, 2020; Ma,

2020). For small and medium sized banks, market risk is caused by the lack of risk management system, talents, insufficient support from the government and the difficulty of collecting information (Sun & Wang, 2017). Additionally, various changes in the international market have caused market risk (Li, 2018).

## **2.2 Credit Risk Management**

Credit risk management is defined as the effective management of the credit risk which is the risk of a loan default by the borrowers by failing to meet their loan repayment obligations on time (Martens et al., 2008). Credit risk arises when the borrowers cannot meet their payment obligations and the profitability of a bank is affected when there are a lot of loan defaults (Accornero et al., 2018). Credit risk is one of the critical risks encountered by the banks where even the defaults by a few customers can be greatly costly for the banks (Khalid et al., 2021). The risk includes loss of principal and interest payment, cash flow disruption, and more collection costs. It could include partial or complete loss of the amount (Catherine, 2020). It is linked with portfolio performance of the banks and credit risk management helps in reducing the risks adjusted pricing rate of return by maintaining the risks within acceptable levels (Antunes & Gonzalez, 2015). Credit risk is indicated by the number of subpar loans, nonperforming loans, problematic loans and loan loss reserves of the banks (Naili & Lahrichi, 2022).

Credit risk management is crucial for the survival and growth of the institutions and is a systematic approach to managing uncertainties through risk assessment, risk management strategies and the risk mitigation by applying managerial resources (Afriyie & Akotey, 2012). Credit risk management of a bank includes a range of policies that are applied to manage and monitor the activities and transactions that can cause negative impacts on banking operations, which are then identified, controlled and minimized by using various proactive measures (Stockport et al., 2009). The policies in practices are basis for standard processes, models, practices, management tools, evaluation criteria and review time intervals that are being implemented within the entire system of the bank. Credit risk management procedures allow the banks to develop a transparent procedure in order to lend new loans in addition to provide credit extensions. Credit risk management also reduces the associated risks through monitoring and other required measures (Rajendran, 2022). The loan applications are evaluated via the credit granting process and control mechanisms

which help in assisting in ensuring that the entire loan portfolio of the integrity of the bank. Efficient credit risk management involves the development of appropriate credit risk environment, strong credit granting processes, suitable credit administration, measuring, monitoring and controlling credit risk, policies and strategies as well as the method to manage the credit portfolio (Bank for International Settlements, 1999).

Risk identification is the first step in risk management process and includes credit application evaluation, reviewing credit proposals, assessing potential associated risks, analyzing borrower characters and their credit history (Geitangi, 2015). The second stage is credit assessment and involves checking for creditworthiness of the borrowers and involves measuring and assessing risks in terms of magnitude and frequency of the probability of occurrence (Tetteh, 2017). The last stage is credit risk control which is the protecting the organization against exposure and it is conducted through the application of standards, tools, techniques and training (Engels et al., 2011).

By effectively managing the credit risk, banks can not only achieve survival and business profitability, they can also contribute towards industry stability and efficient resource allocation within the economy (Abdullah et al., 2020). The goal of credit risk management is to maximize the risk-adjusted rate of return of the banks by maintaining credit risk within acceptable limits. Credit risk management includes the management of the overall bank portfolio as well as individual credit transactions (Velliscig et al., 2022). Without credit risk management, it can even lead to turmoil in the banking industry and even financial crisis (Berger et al., 1997). Effective credit risk management on the other hand can increase profitability of the bank and also enhances the banking sector development through sufficient working capital allocation within the economy (Ghosh, 2015). Credit risk management is useful in calculating how much exposure the banks have against the counterparty exposure to have some mitigation strategies (Catherine, 2020).

### **2.3 Performance of Commercial Banks**

Performance is defined as the degree to which an organization is able to satisfy the stakeholder needs and contribute towards survival of the organization (Griffin, 2003). It is defined as the data in relation to the accomplishment of the organization in terms of both financial and non-financial aspects which is in contribution towards the organizational

goals (Taouab, 2019). Performance of the banks is defined as the main driver that generates profitability via their various aspects of operations and is also the purpose of the activities of the banks (Ferrouhi, 2018). It is also defined as the effectiveness of the financial intermediation process in achieving the stakeholder objectives in a sustainable manner.

Performance is measured by applying metrics and indicators of both quantitative and qualitative, including financial data, performance and effectiveness of the organization (Venkatraman & Ramanujam, 1986). Performance of a bank is measured using different perspectives which include both financial and non-financial indicators of the banks. Performance in the banking industry includes a list of indicators including competitiveness, market share, profitability, customer satisfaction, quality service, efficiency and many more (Galletta et al., 2022).

Performance measurement approaches can be divided into objective and subjective measurement. Objective measurements are related to financial measures and subjective measurements are related to self-reported measures (Elgestad et al., 2019). There are also two approaches which are structural and non-structural approaches. Non-structural approaches include various performance measures of ROE, ROA, net interest margins, Tobin's q-ratio and so on. On the other hand, structural approaches are based on efficiency of how well a bank performs in terms of transforming the inputs into outputs (Hughes & Mester, 2015).

Financial performance of the banks is impacted by credit risk and other risk factors, with credit risk affecting the profitability of the bank (Afolabi et al., 2020). When there are financial risks for a banking organization, it limits the ability of the bank to achieve the business-related goals (Abubakar et al., 2019). The higher the credit risk of a bank, the higher chance of the bank to experience negative financial impacts which then affects the performance of the bank negatively (Kaaya & Pastory, 2013). The financial risks of the banking institutions pose limits on the ability of the banks in achieving the business objectives of the bank (Abubakar et al., 2019).

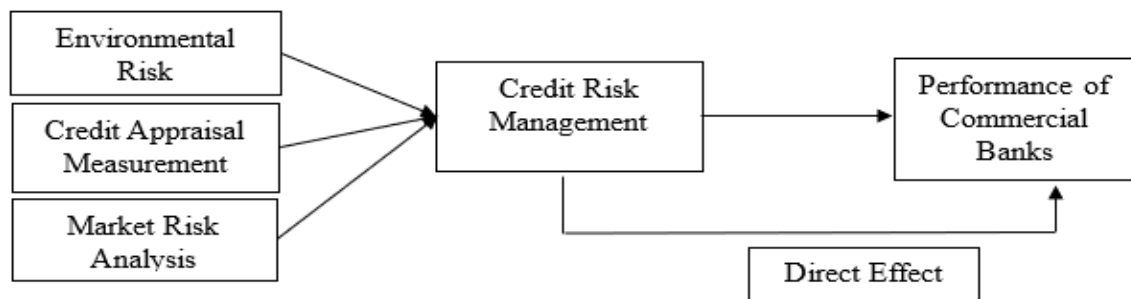
It is important to measure performance as it helps in directing the organization in order to achieve their strategic and operational goals (Popova & Sharpanskykh, 2010). Performance has four levels and the first level is generating vision and transforming it into measurable objectives. Then, it is related to growing financial wise and market wise and

the third level is concerned with operational aspects, including customer satisfaction, flexibility and employee productivity. Lastly, it is concerned with product quality, process efficiency, delivery and organizational waste (Taouab, 2019). Through effective credit risk management, the viability and profitability of the businesses are supported and also the systemic stability and the efficient capital allocation of the economy is also contributed by it (Abdullah et al., 2020). It is extremely important in assisting the financial institutions to develop and encourage sustainability and resilience. Credit risk management affects the profitability of the banking institutions. Credit risk management is now shifted from compliance-based function to high level activity that is integrated in the top decision making and strategy development (Oudat & Ali, 2021).

## 2.4 Previous Study

Bhatt et al. (2023) examined the determinants of credit risk management and their relationship with the performance of commercial banks in Nepal. The objective of the study was to examine the determinants of credit risk management and their relationship with the performance of commercial banks and also to examine the mediating role of credit risk management on the performance of commercial banks in Nepal. The population of the study was 350 registered commercial banks and institutions and a sample of 211 was selected. Simple random sampling was applied in selecting the commercial banks and purposive sampling was applied to select the respondents who were the individuals with management and operational responsibilities that were related to risk and performance of the banks. A closed-ended questionnaire was applied in collecting the data and the data was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The following Figure (2.1) shows the conceptual framework of Bhatt et al. (2023).

**Figure (2.1) Conceptual Framework of Bhatt et al.**



Source: Bhatt et al. (2023)

Based on the findings, it was found that there was a positive relationship between environmental risk and credit risk management. It was also found that credit appraisal measurements and market risk analysis have a significant effect on credit risk management. It was also found that credit risk management acts as a mediator between the relationship of environmental risk, credit appraisal measurements and market risk analysis and the performance of commercial banks.

## 2.5 Conceptual Framework of the Study

Based on the previous study, the conceptual framework of the current study is developed. The following Figure (2.2) shows the conceptual framework of the study.

**Figure (2.2) Conceptual Framework of the Study**



Source: Adapted from Bhatt et al. (2025)

Based on the conceptual framework, as a first step, the independent variables are environmental risk, credit appraisal measurement and market risk analysis and the dependent variable is credit risk management according to Bhatt et al. (2023). As a second step, the independent variable is credit risk management and the dependent variable is performance of commercial bank according to Bhatt et al. (2023).

The conceptual framework presented in this study offers a structured understanding of determinants of credit risk management and performance of A Bank within the context of A Bank. By integrating these constructs, the framework provides a comprehensive approach to analyzing the determinants of credit risk management such as environmental risk, credit appraisal measurement and market risk analysis in shaping effective credit risk management and performance of A Bank.

## **CHAPTER 3**

### **PROFILE AND DETERMINANTS OF CREDIT RISK MANAGEMENT OF A BANK**

This chapter involved two parts. In the first part, the profile of A Bank. It consists of its vision, mission and organization structure. In the second part, environmental risk, credit appraisal measurement, market risk analysis applied by A Bank. The third part covers the demographic profile of the respondents and the reliability analysis.

#### **3.1 Profile of A Bank**

Ayeyarwaddy Farmers Development Bank, commonly known as A Bank, was officially established on 3<sup>rd</sup> December 2014 under Notification No. 3, 2014 issued by the Central Bank. The company was subsequently registered on 22<sup>nd</sup> December 2014 in accordance with the national company laws. On 17<sup>th</sup> November 2015, A Bank was granted its Commercial Banking License No. MAB/P-34/(11)2015, which also marked the inauguration of its very first branch in Patheingyi. The bank's headquarters is located at No. 108, on the corner of Kabaraye Pagoda Road and Nat Mauk Road, in Bahan Township, Yangon. Since its inception, A Bank has expanded significantly and now operates 50 branches across the country, enabling it to serve a wide customer base in both urban and rural areas. A Bank operates a network of branches across Myanmar, including major locations such as the Yangon, Mandalay, Ayeyarwaddy and Magway as well as regional branches like the one in Myeik. These branches provide essential banking services such as deposits, withdrawals, cash handling, teller services, and ATM access. For retail and SME clients, A Bank offers a variety of products including current and savings accounts, overdraft services, and convenient interbank transfer options. The bank also provides digital banking solutions such as A Bank Internet Banking for secure payments and fund transfers, along with the A+ Wallet, MPU, and Visa. Lending products include personal loans, SME financing, home loans, hire-purchase, and commercial loans. For premium customers, A Bank offers exclusive services under "THE ICONIC" program, featuring relationship management, mortgage support, safe deposit lockers, and lifestyle benefits

The vision of A Bank is to become a trusted, innovative, and inclusive financial institution that contributes meaningfully to national development through responsible credit expansion and service excellence. This vision underscores the bank's aspiration to drive sustainable economic growth by empowering individuals, farmers, and enterprises with accessible, efficient, and customized financial solutions. The vision of A Bank is consistently reinforced by a commitment to client trust, community development, and institutional resilience. A Bank seeks to position itself as a catalyst for inclusive prosperity by expanding financial access across diverse economic sectors.

The mission of A Bank centers on delivering reliable, secure, and ethical banking services that align with the needs of a rapidly evolving financial ecosystem. It emphasizes customer empowerment through improved access to credit, especially for rural communities and small businesses. A Bank is committed to strengthening economic resilience by fostering responsible lending and prudent risk management. The mission reflects the bank's dedication to promoting financial literacy and facilitating long-term client success.

A Bank aims to build enduring client relationships through professional service delivery, transparent communication, and customer-centered financial products. The mission supports initiatives that enhance digital banking access, reinforce regulatory compliance, and improve internal efficiency. By aligning daily operations with long-term strategic goals, A Bank ensures that its mission remains responsive to both internal performance standards and external market dynamics.

The core values of A Bank include integrity, innovation, accountability, service excellence, and sustainability. Integrity forms the foundation of all its interactions, ensuring fairness, transparency, and trust in every transaction. Innovation drives the development of user-friendly financial tools and adaptive services. Accountability promotes a culture of ownership and professionalism, where all staff uphold the highest ethical standards. Service excellence is reflected in timely assistance, continuous improvement, and responsiveness to client needs.

Sustainability guides A Bank's efforts to integrate environmental and social considerations into its operations and credit decisions. The bank promotes a collaborative work environment that values teamwork, shared responsibility, and mutual respect.

Adaptability is a key trait supported within the institution, ensuring that staff and policies remain agile in the face of changing economic conditions.

### **3.2 Organization Structure of A Bank**

In order to achieve the vision and mission of the bank, A bank systematically sets up with many departments. Each department performs the different functions and services. The organizational structure of A bank illustrated in Figure (3.1). According to the Figure (3.1), it organizes with 17 departments and it have each head of department. Among 17 departments, 9 departments are business departments. They are corporate banking department, retail banking, credit department, SME department, trade department, FX department, privilege banking, cards and payment department, A + department. Another 8 departments are supporting department. They are ICT department, human resources department, legal and compliance, administrations department, marketing and branding department, product department, customer service, payment and financial control department.

At the top of the hierarchy sits the Board of Directors, a governing body responsible for setting the bank's strategic direction, ensuring compliance with regulations, and safeguarding the interests of shareholders. Comprised of experienced professionals and industry experts, the board provides oversight and guidance to the bank's executive leadership.

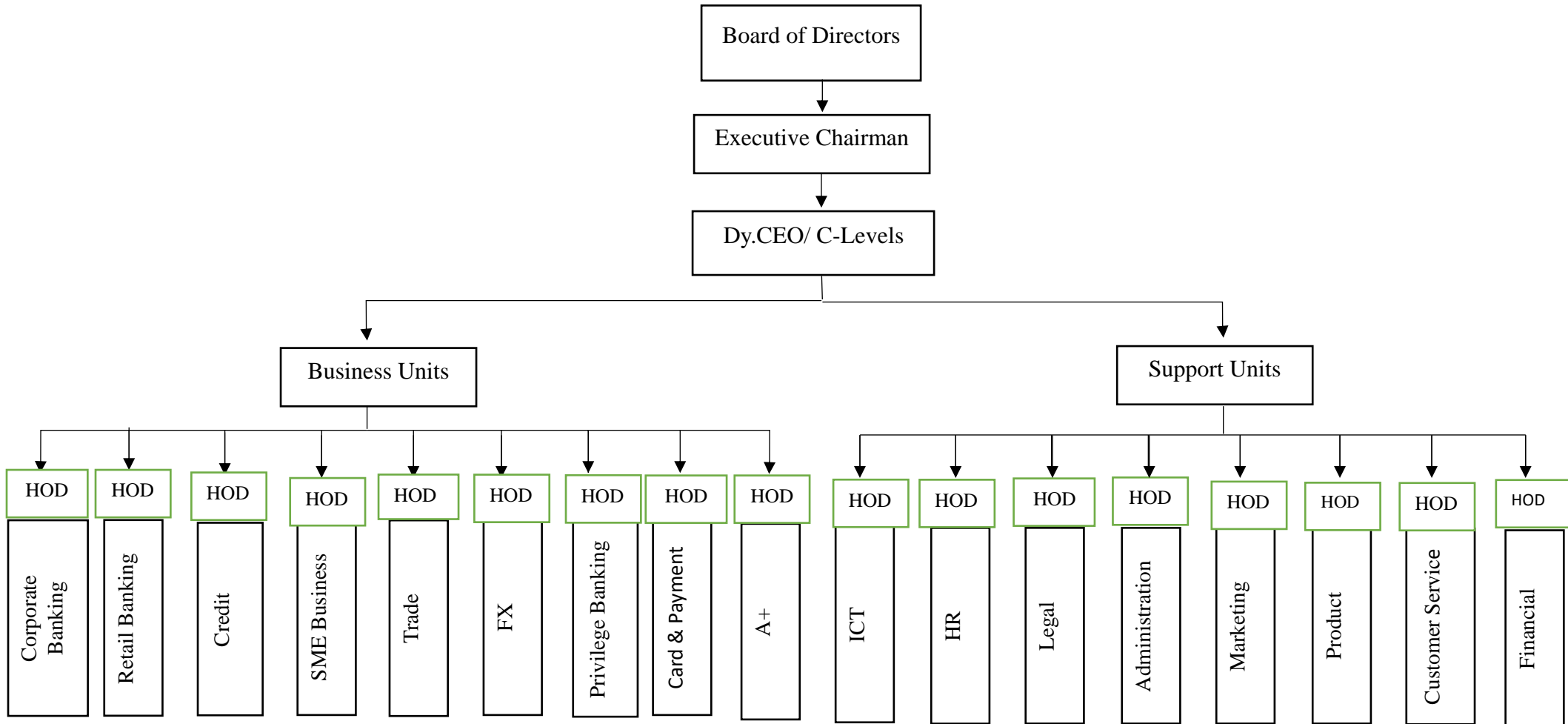
Below the Board of Directors, there are C-Levels such as Chief Technology Officer, Chief Operating Officer, Chief Compliance Officer, Deputy Chief Financial Officer, Deputy Chief Business Officer,

Chief Digital Operating Officer, Chief Corporate Affairs Officer, Chief Credit Officer and Deputy Chief Executive Officer. This team is tasked with implementing the board's strategic vision, managing day-to-day operations, and driving the bank's financial performance.

Below C-Level, there are the head of department (HOD). Each department have to play specific role in contributing to overall functioning and success of A Bank. Department heads have to report to their respective C-Level. And all of C-Levels have to report

Executive Chairman. The organization chart of A Bank is presented in the following Figure (3.1).

**Figure (3.1) Organization Chart of A Bank**



Source: A Bank Co. Ltd, 2025

### **(1) Corporate Banking Department**

The corporate banking department of A Bank functions as a specialized financial partner for large corporations and institutions. It offers a broad range of services customized to address the specific financial requirements of business clients. This include relationship management, where bankers collaborate closely with clients to comprehend their objectives and provide tailored solutions. Corporate banking provides credit facilities, including loans and cash management services to enhance cash flow, as well as trade financing solutions for international transactions. Corporate banking enhances customer value through cross-selling opportunities by providing a comprehensive range of banking products and services. It is essential for facilitating organizational growth and success.

### **(2) Retail Banking Department**

The retail banking department of A Bank serves individual clients, providing a wide range of financial products and services. It offers fundamental financial services including savings and checking accounts, personal loans, debit cards, and credit cards. Retail banking encompasses services such as mobile banking, internet banking, ATM access, and customer assistance. It emphasizes ease, accessibility, and tailored service to fulfill the daily banking requirements of individuals. Branch sales personnel interact with consumers, evaluate their financial objectives, and propose appropriate products and services. The primary clientele of retail banking comprises individuals, families, and small enterprises in want of fundamental banking services and financial advice.

### **(3) Credit Department**

The credit department at A Bank plays a critical role in maintaining the bank's financial health by ensuring that all lending activities are conducted with prudence and due diligence. This department is responsible for assessing loan applications across a diverse range of client segments including retail, corporate, and SME customers. Through rigorous credit underwriting processes, the team evaluates the borrower's financial capacity, creditworthiness,

and repayment potential. This involves a thorough analysis of financial statements, income stability, existing debt obligations, and past credit behavior to ensure informed and responsible lending decisions.

In addition to evaluating applicants, the department also defines appropriate loan terms, interest rates, and collateral requirements, aligning each loan offering with internal credit policies and the regulatory framework set by financial authorities. Once loans are approved and disbursed, the department monitors their performance, identifies early warning signs of delinquency, and implements proactive recovery strategies when necessary. This dual responsibility of pre- and post-disbursement oversight helps mitigate credit losses and safeguard the bank's capital.

Moreover, the credit department continuously monitors environmental risks, credit appraisal quality, and market risk factors to refine its credit risk management practices. By integrating these elements into the credit evaluation and decision-making process, the department ensures that risks are effectively identified, measured, and mitigated. This comprehensive approach contributes directly to enhancing the overall performance and profitability of A Bank, reinforcing its commitment to prudent banking practices and sustainable growth in an increasingly complex financial landscape.

#### **(4) Small and Medium Enterprise Department**

The SME (small and medium enterprise) department of A Bank specializes in providing financial solutions to the needs of small and medium-sized businesses. Its primary mission is to provide a variety of banking products and services tailored to assist SMEs, including business loans. The section concentrates on comprehending the distinct difficulties and opportunities encountered by SMEs, offering tailored guidance and support to facilitate their growth and success. Furthermore, it may provide cash management services, financial consulting, and access to networking and educational resources to facilitate the growth of SME clients.

## **(5) Trade Department**

The trade department of A Bank facilitates international trade transactions for corporate customers by offering a range of trade finance solutions and services. The primary objective is to offer financial tools, including letters of credit, bank guarantee, and trade finance advising, to assist importers and exporters in executing cross-border commerce securely and efficiently. The department aids clients with trade documentation, compliance to international trade regulations, and risk management techniques. The trade department utilizes its knowledge in global trade finance to assist firms in risk mitigation, cash flow enhancement, and seizing foreign market possibilities.

## **(6) Foreign Exchange Department**

The foreign exchange (FX) department of A Bank specializes in offering currency exchange and risk management services to clients involved in international transactions. Its principal role is to enable the conversion of one currency into another at reasonable exchange rates. The department also provides protection instruments, including forward contracts, options, and swaps, to assist clients in managing foreign exchange risk due to volatile currency markets. The FX department provides expert research and market insights to help customers make educated decisions, optimize currency exposures, and limit potential losses. It is essential in enabling international commerce and assisting clients in achieving their financial goals.

## **(7) Privilege Banking Department**

The privilege banking department of A Bank services high-net-worth people, providing exclusive banking services and customized financial solutions. Its principal mission is to deliver VIP treatment and customized wealth management services to rich clients. This include specialized relationship managers that provide specialized guidance and support in investment management, estate planning, and wealth preservation. The privilege banking department provides access to unique banking products, comfortable benefits, and preferential rates on loans and other financial services. By concentrating on the distinct requirements and

preferences of high-net-worth clients, it seeks to deliver an exceptional banking experience and assist them in attaining their financial objectives.

**(8) Cards and Payment Department**

The cards and payment department of A Bank handles each aspect of card issuing, payment processing, and associated services. Its functionalities include the issuance of credit, debit, and prepaid cards to customers, as well as the safe management of cardholder accounts and transactions. The agency supervises payment processing networks, guaranteeing smooth and efficient handling of card transactions both locally and globally. Furthermore, it creates and executes cutting-edge payment solutions, including mobile payments, digital wallets, and contactless payment technologies. The department protects cardholder data and prevents illegal usage through fraud monitoring and risk management efforts. It seeks to deliver convenient, secure, and dependable payment options to fulfill customer needs.

**(9) A+ Mobile Wallet Department**

The A+ mobile wallet department manages all facets of A Bank's digital payment infrastructure. This department often comprises two primary teams: the business team and the operations team. The business team focuses on strategy planning, relationship production, and market expansion. They collaborate directly with merchants, agents, and various partners to integrate them into the mobile wallet platform, negotiate agreements, and enhance user adoption. Furthermore, they examine market trends, identify development prospects, and build creative features to improve the client experience. The operations team handles the daily management of the mobile wallet platform. They manage client support, transaction control, fraud prevention, and system maintenance. This team provides the seamless and secure operation of the mobile wallet for all stakeholders, including agents, merchants, and customers.

**(10) Information and Communication Technology Department**

The ICT (information and communication technology) department of A Bank controls the management and maintenance of the bank's technological infrastructure and systems. Its functionalities include the development, implementation, and support of software applications,

networks, and hardware devices to guarantee smooth operation across all departments. The ICT department prioritizes cybersecurity by establishing steps to prevent the bank's data and systems from cyber threats and illegal access. In addition, it is integral to digital transformation efforts, utilizing technology to improve client experience, enhance operational efficiency, and promote creativity within the bank. The ICT department empowers the bank to utilize technology efficiently to attain its strategic goals.

**(11) Human Resources Department**

The HR (human resources) department of a bank supervises all facets of the business's personnel management. Its functionalities involve recruitment, hiring, and onboarding of personnel, in addition to managing employee benefits, salary, and performance appraisal processes. The HR department organizes training and development programs to improve staff abilities and skills. It also manages employee relations, promoting a healthy work environment and addressing any issues or complaints that may emerge. The HR department is crucial in executing HR policies and procedures, guaranteeing adherence to labor laws and regulations, and promoting a culture of diversity, equity, and inclusion inside the bank.

**(12) Legal and Compliance Department**

The legal and compliance department of A Bank is tasked with ensuring the bank follows to legal and regulatory standards. The capability involves monitoring and advising on laws and regulations relevant to banking operations, preparing and revising legal documents including contracts and agreements, and representing the bank in legal proceedings. The agency also supervises compliance to anti-money laundering (AML) and know your customer (KYC) laws, along with other legal obligations including risk management and protecting customers. It performs internal audits, observes regulatory changes, and enforces rules and processes to effectively manage legal and compliance risks.

**(13) Administration Department**

The administration department of A Bank manages many administrative functions vital to efficient operations. Its functionalities consist of the management of facilities and office spaces, supervision of procurement and inventory management, and coordination of logistical

support for events and meetings. The department controls vendor relationships, negotiates contracts, and ensures compliance to relevant laws and policies. It also contributes to the administration of staff services, including transportation, dining, and security. The administration department enhances the bank's operational efficiency by delivering vital support services and fostering a favorable work environment for employees.

**(14) Market and Branding Department**

The marketing and branding department of A Bank is responsible for advertising the bank's products, services and reputation to the target customer. Its functionalities involve the creation of marketing plans, campaigns, and promotional materials to attract and keep customers. The section performs market research to understand customer needs and preferences, with competition analysis to strategically position the bank. Additionally, it manages the bank's brand identity, guaranteeing consistency across all communications and interactions. The marketing and branding department is essential for building brand awareness, developing customer loyalty, and driving business success through strategic marketing activities.

**(15) Product Department**

The product department of A Bank is tasked with the development and management of the bank's variety of financial goods and services. Its functionalities involve identifying business possibilities, doing market research, and evaluating customer needs to plan and build new goods. The department monitors current goods, analyzes performance data, and suggests improvements or modifications to maintain competitive and relevance. Additionally, it partners with other departments, including marketing, technology, and risk management, to successfully introduce new products. The product department seeks to fulfill customer expectations, enhance revenue development, and sustain a competitive advantage in the market by ongoing innovation and development of its offers.

### **(16) Customer Service Department**

The customer service department of A Bank is committed to provide outstanding service and assistance to clients. Its operations include responding to inquiries, settling complaints, and providing assistance with account-related matters efficiently and courteously. The department manages multiple communication channels, including telephone, email, and face-to-face encounters, guaranteeing accessibility and responsiveness to customer requirements. Moreover, it informs customers about banking products, services, and rules, assisting them in making informed financial choices. The customer service department is essential for establishing and sustaining strong client connections, improving satisfaction, and cultivating loyalty to the bank.

### **(17) Payment and Financial Control Department**

The payment and financial Control department of A Bank monitors the bank's financial operations and guarantees compliance to accounting standards and regulatory mandates. Its capabilities include financial planning, budgeting, and forecasting to enhance resource allocation and attain strategic goals. The department manages financial reporting and analysis, delivering precise and prompt financial information to stakeholders for decision-making. It oversees liquidity, capital, and risk management tasks to ensure financial stability and reduce hazards. The finance department performs financial performance assessments, finds opportunities for enhancement, and enforces financial controls to protect assets and promote financial integrity inside the bank.

## **3.3 Determinants of Credit Risk Management at A Bank**

Credit risk management involves the process of identifying, measuring, monitoring, and controlling the potential that a borrower may fail to fulfill their debt obligations, which can negatively affect the financial performance of a bank. At A Bank, several determinants shape the overall effectiveness of credit risk management practices. A primary determinant is the strength and depth of the credit appraisal framework, which evaluates borrowers based on financial capacity, business viability, and repayment history. The bank systematically examines

financial ratios such as the debt service coverage ratio, current ratio, and profitability margins to assess the borrower's capacity to repay.

In addition to financial indicators, the character of the borrower, including reputation and historical performance is carefully analyzed. The availability and quality of collateral play a significant role in mitigating credit risk, with strong preference for assets that are easily liquidated and legally enforceable. Credit risk assessments are influenced by the borrower's sector and the overall economic outlook affecting that industry. Risk rating systems are used internally to categorize borrowers into different risk classes, allowing the bank to allocate capital and set interest margins according to the level of exposure.

The independence and structure of the credit committee and risk units ensure objectivity and oversight in the decision-making process. A multi-tier approval system is enforced for higher loan amounts, reducing the likelihood of credit concentration and operational risk. Regulations imposed by the central banking authority establish minimum standards for capital adequacy, loan classification, and provisioning which guide internal policy development. A Bank closely monitors economic trends such as inflation, exchange rate movement, and interest rate volatility, which are critical in shaping credit limits and pricing models.

Data collection plays an essential role in evaluating creditworthiness and A Bank invests in systems that facilitate timely and accurate financial information. Monitoring of existing loans includes regular financial reviews and site visits, particularly for large corporate and SME borrowers. Credit officers are regularly trained to sharpen their skills in risk analysis, legal documentation, and loan structuring. Diversification of the credit portfolio by industry, borrower type, and geography also helps in reducing systemic exposure.

The use of structured credit scoring frameworks supports consistency and reliability in decision-making across departments. Internal audits and compliance reviews serve as control mechanisms that flag weaknesses in credit procedures. A Bank applies stress testing techniques to simulate adverse economic scenarios and assess potential impacts on the loan portfolio. These insights allow the bank to implement preemptive strategies such as adjusting sectoral

exposure or restructuring repayment terms. Post-lending monitoring is emphasized with periodic reviews to detect early warning signs of loan deterioration.

Credit policies are updated in response to regulatory changes and economic developments, ensuring continued relevance and risk alignment. Governance from senior management reinforces a culture of accountability and prudence in credit operations. Risk-adjusted performance measures are used to align loan pricing and exposure with expected returns. Ultimately, a combination of institutional discipline, regulatory compliance, human capital development, and data-informed credit practices defines the strength of credit risk management at A Bank.

### **3.3.1 Environmental Risk at A Bank**

A Bank recognizes that environmental factors can strongly influence its lending operations and financial stability. Among these factors, earthquakes are considered one of the most serious and unpredictable dangers, especially in areas that often experience tectonic activity. Earthquakes can cause serious damage to borrower properties, stop business activities, and lead to weaker loan repayment, especially in sectors related to infrastructure. In addition, problems like limited natural resources and climate change can reduce a borrower's ability to pay back loans.

To manage these problems, A Bank includes environmental checks as part of its credit assessment process. A Bank reviews whether the business or project may cause harm to the environment or be affected by environmental conditions. It pays close attention to the business sector, the location of the project, and whether the borrower follows environmental laws. This helps A Bank avoid giving loans to activities that could cause serious environmental problems and supports long-term safety and legal compliance.

Environmental risk at A Bank means the possible negative effects of natural or environmental events on a borrower's ability to repay their loan. This includes physical dangers such as earthquakes, floods, and droughts, and also other changes like new environmental laws. Since A Bank provides loans to various sectors such as farming, small industries, and construction, it gives careful attention to areas that may be affected by natural events. For example, strong weather or earthquakes can reduce crop production, damage roads and

buildings and delay projects. These situations can lower the income of borrowers and increase the chance of loan problems. Therefore, projects in risky locations are checked more carefully.

To deal with these challenges, A Bank follows some general practices. It asks borrowers to show proof of environmental approvals before loan approval. It checks if businesses have followed rules in the past. In some cases, A Bank asks for extra documents or reports from borrowers if there are concerns about environmental problems. The bank also gives basic training to credit staff so they can notice possible environmental issues when reviewing loan applications. A Bank works step by step to make sure that environmental concerns are part of its normal loan decision process, helping protect both the bank and the borrowers.

### **3.3.2 Credit Appraisal Measurement at A Bank**

A Bank utilizes a robust credit appraisal framework that evaluates applicants from the retail, SME, and corporate segments based on repayment capacity, financial stability, and business performance. The bank follows the "5 Cs" framework such as Character, Capacity, Capital, Collateral, and Conditions to assess loan applicants, ensuring that credit decisions are data-driven and aligned with risk tolerance. To enhance appraisal accuracy, A Bank employs both quantitative tools such as financial ratio analysis, debt service coverage ratio (DSCR), and qualitative measures including management background checks and industry trends. These metrics are assessed in alignment with the Central Bank of Myanmar's prudential guidelines. The comprehensive evaluation model ensures that the bank's lending practices remain transparent, consistent, and compliant.

Credit appraisal at A Bank begins with a thorough borrower profiling process. This process includes evaluating the historical financial statements of businesses and reviewing their cash flow sustainability. Borrowers are classified into risk categories based on their debt servicing behavior, liquidity position, and capital adequacy. The appraisal framework integrates sectoral risk sensitivity to account for differences in business cycles and economic exposures across industries. For example, SMEs operating in highly seasonal industries are subjected to cash flow stress-testing to determine repayment feasibility during downturns. Credit officers are trained to apply standardized scoring models that weigh each of the 5 Cs

according to predefined risk thresholds. This scoring system ensures objectivity and helps reduce bias in loan approvals.

The character assessment involves reviewing the borrower's credit history, reputation in the market, and compliance with previous financial obligations. A Bank uses internal databases and third-party credit bureau information to verify this component. Capacity evaluation includes a detailed review of projected earnings, existing liabilities, and the adequacy of revenue streams to meet loan installments. Capital is assessed through the borrower's net worth, retained earnings, and contribution of equity in the proposed business or project. For businesses, leverage ratios, profitability margins, and efficiency indicators such as return on assets (ROA) and return on equity (ROE) are also analyzed.

Collateral assessment includes verification of ownership, valuation reports, and enforceability of pledged assets. A Bank maintains strict guidelines for collateral-to-loan value ratios and requires legal due diligence to ensure clean title documentation. Conditions refer to macroeconomic indicators, industry-specific risks and regulatory changes that may influence the borrower's business performance or creditworthiness.

A Bank also deploys digital tools to automate parts of the appraisal process. Credit scoring engines are integrated with core banking systems to generate initial risk assessments in real time. These engines pull data from financial statements, tax records, and transaction history to predict the probability of default. High-risk proposals are flagged for additional scrutiny by senior credit committees. For corporate clients, the bank adopts a relationship-based lending model, where relationship managers work closely with clients to understand their financial dynamics and evolving credit needs.

A layered approval hierarchy is used to ensure quality control and prevent concentration of credit authority. Every loan above a specified threshold must pass through multiple levels of review, including the credit department and credit committee. Stress testing are applied to simulate potential cash flow constraints under adverse conditions. These assessments are factored into final loan structuring, repayment schedules or the need for guarantees.

The credit appraisal framework is continuously reviewed and updated based on portfolio performance and regulatory feedback. Post-disbursement monitoring is an integral

part of the appraisal lifecycle. Borrowers are required to make regular repayment, submit financial updates and any deviations from credit policy and procedures. If they have any deviations, A Bank prompt corrective action, such as restructuring, revaluation of collateral, or increased monitoring frequency.

A Bank also emphasizes capacity building among its credit staff through regular training on emerging appraisal methods and risk identification techniques. Workshops are conducted on the application of sector-specific risk, environmental and social due diligence. A Bank ensures consistency in documentation through the use of standardized appraisal templates and checklists, minimizing procedural errors.

In addition, the credit department regularly monitor sector studies, industry benchmarks, and historical case studies that guide credit analysts in making informed judgments. Internal audit teams conduct periodic reviews of credit files to ensure appraisal quality and policy compliance. A Bank encourages feedback loops, where lessons from past credit defaults are fed back into the appraisal design to strengthen future risk filters.

### **3.3.3 Market Risk Analysis at A Bank**

A Bank recognizes that market risk is one of the key challenges that can affect its financial health. Market risks include fluctuations in interest rates, changes in foreign exchange rates, and rising inflation. These changes can reduce the value of the bank's assets and lower its profit. To reduce these risks, A Bank conducts regular reviews of the market environment. These reviews help the bank make timely decisions to protect its position.

A Bank follows the guidelines set by the Central Bank of Myanmar to manage market-related exposures. These regulations provide a clear structure for monitoring and controlling risk. The bank carries out daily monitoring of its market positions. In addition, portfolio-level reviews are conducted every quarter to assess overall exposure. This approach allows A Bank to react quickly to market changes and economic uncertainty.

Daily monitoring helps the bank detect any unusual movements early. Quarterly reviews help in adjusting long-term strategies. These practices also support strong liquidity

management. Managing liquidity well is important to meet customer demands during uncertain times. It also builds trust among investors and depositors.

A Bank pays special attention to interest rate risk. This type of risk comes from differences in the timing of interest rate changes for assets and liabilities. For interest-sensitive items, the bank calculates mismatches in their repricing schedules. This allows the bank to estimate changes in net interest income. Managing these mismatches is important to maintain stable earnings. A Bank also considers how quickly assets and liabilities respond to rate changes.

Foreign exchange risk is another key concern for A Bank. This risk arises when the bank holds assets or liabilities in foreign currencies. Exchange rate changes can cause gains or losses in value. A Bank monitors all foreign currency exposures on a daily basis. The bank takes measures to reduce this risk using hedging strategies when needed.

Inflation is another factor that can affect the bank's market position. Rising inflation can lower the real value of returns. A Bank regularly reviews inflation trends and forecasts. This allows the bank to adjust its pricing, investment, and lending strategies. The bank also watches the central bank's interest rate policies. These policies often change in response to inflation conditions.

To prepare for unexpected events, A Bank also prepare the contingency plan for the adverse and difficult market situations. Scenarios include interest rate changes, sudden currency devaluation, and severe liquidity shortages. The goal is to assess how the bank would perform under these adverse situations.

To ensure rules are followed, internal audits are carried out. These audits check if the bank is complying with its market risk policies. Auditors also review how well the bank's control systems are working. If problems are found, corrective actions are taken. Market risk exposure reports are sent to senior management regularly. These reports help in making important decisions. Reports are also shared with the board-level risk committees. These committees oversee risk management and provide direction. A Bank also learns from past financial crises. The bank reviews how markets behaved during previous downturns. These reviews help in building stronger defenses against future crises.

By using both numbers and expert judgment, A Bank ensures its market risk decisions are balanced. Quantitative data offers measurable insights. Qualitative assessments provide deeper understanding of market behavior. This combination helps the bank make sound decisions. A Bank regularly trains its staff in market risk management. Training covers both theory and practical applications. Staff are taught how to interpret market indicators and respond effectively. This helps maintain high standards across all departments.

In conclusion, A Bank takes a careful and structured approach to managing market risk. Through daily monitoring, internal audits, and staff training, the bank builds strong defenses. These actions help the bank protect its profits, remain stable in changing markets, and gain the trust of its stakeholders.

### **3.4 Demographic Profile of Respondents**

The demographic profile of the 169 respondents is presented which include gender, age, marital status, education level, employment position, service years, and monthly income of employees of A Bank. The demographic profile of the respondents is discussed in Table (3.1).

**Table (3.1) Demographic Profile of Respondents**

<b>Sr.No.</b>	<b>Demographic Profile</b>	<b>Description</b>	<b>Number of Respondents</b>	<b>Percentage</b>
1	Gender	Female	94	55.6
		Male	75	44.4
2	Age Level (Years)	Under 20	2	1.2
		20-30	66	39.1
		31-35	42	24.9
		36-45	36	21.3
		46 and Above	23	13.6
3	Marital Status	Single	84	49.7
		Married	85	50.3
4	Education Qualifications	Undergraduate	47	27.8
		Graduate	68	40.2
		Master Degree	48	28.4
		Doctoral Level	6	3.6
5	Employment Position	Associate/Senior Associate	34	20.1
		Assistant Supervisor/Supervisor	41	24.3
		Manager/Senior Manager	52	30.8
		Assistant General Manager/General Manager	29	17.2
		Above General Manager	13	7.7
6	Service (Years)	Less than 1	10	5.9
		1 to 3	44	26
		4 to 6	57	33.7
		Above 6	58	34.3
7	Income Level (MMK)	Below 300,000	12	7.1
		300,001 to 600,000	36	21.3
		600,001 to 900,000	43	25.4
		900,001 to 1,200,000	34	20.1
		1,200,001 to 1,500,000	24	14.2
		1,500,001 and above	20	11.8
<b>Total Respondents</b>			<b>169</b>	<b>100.0</b>

Source: Survey Data (2025)

According to the results in Table (3.1), 169 employees participated in the survey. Among them, 94 respondents (55.6%) are female and 75 (44.4%) are male, indicating a slightly higher female participation rate, which suggests a gender inclusive environment at A Bank.

Regarding age distribution, the largest group of respondents is 66 employees (39.1%) that falls within the 20 to 30 years age range. This is followed by 42 respondents (24.9%) aged

between 31 and 35 years, 36 respondents (21.3%) between 36 and 45 years, and 23 respondents (13.6%) aged 46 and above. Only 2 respondents (1.2%) are under 20 years old. The data shows that the workforce primarily consists of young and early to mid-career professionals.

In terms of marital status, 84 respondents (49.7%) are single and 85 (50.3%) are married, showing a balanced that reflects varying life circumstances and responsibilities among employees. When it comes to education level, 68 respondents (40.2%) hold a bachelor's degree, 48 (28.4%) have a master's degree, 47 (27.8%) are undergraduates, and 6 (3.6%) possess doctoral-level qualifications. This indicates a highly educated workforce at A Bank.

For employment position, 34 respondents (20.1%) are in associate or senior associate roles, 41 (24.3%) are assistant supervisors or supervisors, 74 (43.8%) are managers or senior managers, and 20 (11.8%) are in positions of assistant general manager, general manager, or above. This reflects a strong representation in middle management, supporting operational effectiveness and decision making.

In terms of service years, 10 respondents (5.9%) have been with the bank for less than 1 year, 44 (26.0%) have 1 to 3 years of service, 57 (33.7%) have 4 to 6 years, and 58 (34.3%) have more than 6 years of tenure. Regarding income level, 12 respondents (7.1%) earn below MMK 300,000, 35 (20.7%) earn between MMK 300,001 and 600,000, 43 (25.4%) earn between MMK 600,001 and 900,000, 34 (20.1%) earn between MMK 900,001 and 1,200,000, 21 (12.4%) earn between MMK 1,200,001 and 1,500,000, and 24 (14.2%) earn MMK 1,500,001 and above. This distribution shows that A Bank provides competitive compensation across various experience levels and roles.

In summary, A Bank has a diverse workforce in terms of gender, age, and educational background. The majority of employees are young and hold relevant academic qualifications. The organization has a well-established middle management structure. Employee service years are distributed within a stable range, and compensation levels are consistent across similar roles and experience levels.

### 3.5 Reliability Analysis

Reliability analysis is the measurement of the research instruments to ensure that the measured results are consistent over a number of repeated tests (Mugenda & Mugenda, 1999). When the research instruments are able to provide consistently and measure precisely, they can be trusted. When they offer consistent results, that means there is internal consistency. Reliability analysis is measured using Cronbach's alpha values and it helps determine the extent of the random errors in variable scores as random errors can affect research reliability (Selltiz et al., 1976). According to (Ma et al., 2020), there are six levels of reliability in terms of Cronbach's alpha value and they are shown in Table (3.2).

**Table (3.2) Value Level of Reliability Cronbach's Alpha**

<b>Sr. No.</b>	<b>Cronbach's Alpha Value Level</b>	<b>Level of Reliability</b>
1	0.0 – 0.50	Unacceptable
2	0.50 – 0.60	Poor
3	0.60 – 0.70	Questionable
4	0.70 – 0.80	Acceptable
5	0.80 – 0.90	Good
6	0.90 – 1.00	Excellent

Source: Ma et al. (2010)

According to Table (3.2), (Ma et al., 2020) develops six reliability levels based on Cronbach's Alpha value range. The value levels of reliability of Cronbach's Alpha value of (Ma et al., 2020) are referred in this study. Cronbach's Alpha values for the variables of this study are shown in Table (3.3).

**Table (3.3) Reliability Analysis**

<b>Sr. No.</b>	<b>Variables</b>	<b>No. of items</b>	<b>Cronbach's Alpha</b>	<b>Interpretation</b>
1	Environmental Risk	5	0.847	Good
2	Credit Appraisal Measurement	5	0.784	Acceptable
3	Market Risk Analysis	5	0.775	Acceptable
4	Credit Risk Management	5	0.778	Acceptable
5	Performance of Commercial Bank	5	0.784	Acceptable

Source: Survey Data (2025)

The variables of environmental risk, credit appraisal measurement, market risk analysis, credit risk management and performance of commercial bank are tested for reliability. Table (3.3) shows the Cronbach's alpha values of all the variables of the sample of 169 employees who participated in the study.

Based on Table (3.3), Cronbach's alpha value of environmental risk is 0.847, which falls between 0.80 and 0.90, showing that environmental risk has good reliability. Credit appraisal measurement has a Cronbach's alpha value of 0.784, market risk analysis has a value of 0.775, credit risk management has 0.778 and performance of commercial bank has a value of 0.784, which fall between 0.70 and 0.80, showing that credit appraisal measurements, market risk analysis, credit risk measurement and performance of commercial bank have acceptable reliability.

## **CHAPTER 4**

### **ANALYSIS ON DETERMINANTS OF CREDIT RISK MANAGEMENT AND PERFORMANCE OF A BANK**

This chapter analyzes employee perception on determinants of credit risk management and performance of 169 employees at A Bank. Statistical Package for the Social Sciences (SPSS) software is used to conduct regression analysis for independent and dependent variables. The findings from these analyses are presented in Tables throughout the chapter.

#### **4.1 Employee Perception on Determinants of Credit Risk Management, Credit Risk Management and Performance of A Bank**

Determinants of credit risk management and performance of A Bank is analyzed in this section. A structured questionnaire with a five-point Likert scale (1: strongly disagree, 2: disagree, 3 neutral, 4: agree, 5: strongly agree) is used to collect the primary data. According to Best (1977), the mean values can be interpreted as.

The score among 1.00 – 1.80 means strongly disagree.

The score among 1.81 – 2.60 means disagree.

The score among 2.61 – 3.40 means neutral.

The score among 3.41 – 4.20 means agree.

The score among 4.21 – 5.00 means strongly agree.

The mean score provides an overall measure of the general perception or opinion of the respondents on the items of the variables.

##### **4.1.1 Employee Perception on Determinants of Credit Risk Management at A Bank**

This section analyzes the determinants of credit risk management of A Bank in ensuring the bank has effective risk management practices. The aspects of environmental risk, credit appraisal measurement and market risk analysis are covered.

## 1. Environmental Risk

To analyze environmental risk, five questions are asked of the 169 employees of A Bank. The mean values, standard deviations and overall mean value for environmental risk are shown in Table (4.1) as follows.

**Table (4.1) Environmental Risk**

<b>Sr. No.</b>	<b>Description</b>	<b>Mean</b>	<b>Standard Deviation</b>
1	Regulatory and political changes significantly influence the loan approval decisions.	3.97	0.51
2	Bank credit assessment process includes evaluations of environmental risks, such as climate change and natural disasters.	4.08	0.49
3	Bank regularly adjust our credit policies in response to macroeconomic and environmental changes.	3.95	0.60
4	Borrowers from environmentally vulnerable sectors are subject to additional environmental risk assessments.	3.92	0.64
5	Considering environmental risks in credit assessments helps reduce the institution's non-performing loan (NPL) rates.	3.96	0.59
<b>Overall Mean Value</b>		<b>3.98</b>	

Source: Survey Data (2025)

According to Table (4.1), the mean values (including overall mean) fall between 3.41 and 4.20 at agree level. This indicates that most respondents agree with environmental risk statements of A Bank. Employees agree that the credit assessment process at A Bank covers environmental risk evaluation like climate change and natural disasters and frameworks like ESRA are applied at the bank, highlighting the environmental considerations in lending practices. They also agree that regulatory and political changes influence loan approval decisions as A Bank is responsive towards external governance and policy environments

through their regular reviews of internal credit policies, and Environmental Risk Committee. They also believe that considering environmental risks in credit assessment helps in reducing non-performing loan (NPL) rates, showing integrating sustainability values brings practical benefits. Employees also agree that the bank regularly adjusts the credit policies against changes in macroeconomic changes. Moreover, they agree that the borrowers from areas that are environmentally vulnerable are subjected to more environmental risk assessments.

## 2. Credit Appraisal Measurement

To analyze credit appraisal measurement, five questions are asked of the 169 employees of A Bank. The mean values, standard deviations and overall mean value for credit appraisal measurement are shown in Table (4.2) as follows.

**Table (4.2) Credit Appraisal Measurement**

Sr. No.	Description	Mean	Standard Deviation
1	The bank's credit appraisal process is effective in predicting the borrower's repayment capacity.	4.06	0.68
2	The credit appraisal system includes a comprehensive assessment of the "5 Cs" – Character, Capacity, Capital, Collateral, and Conditions.	4.08	0.62
3	Improvements in credit appraisal practices have resulted in a reduction in loan defaults.	4.11	0.61
4	Credit appraisal standards are consistently applied across all branches and departments.	4.07	0.60
5	A strong credit appraisal process contributes to a healthier and more stable loan portfolio.	4.09	0.66
<b>Overall Mean Value</b>		<b>4.08</b>	

Source: Survey Data (2025)

According to Table (4.2), the mean values (including overall mean) fall between 3.41 and 4.20 at agree level. This indicates that most respondents agree with credit appraisal measurement statements of A Bank. Employees agree that the credit appraisal practices

improvement has led to loan defaults reduction, matching evaluation methods of A Bank are effective in reducing credit risk. Moreover, they also agree that a strong credit appraisal process leads to a loan portfolio that is more stable and healthier, highlighting the importance of stringent assessment practices. They also agree that the credit appraisal system applies a comprehensive assessment of the 5Cs which are character, capacity, capital, collateral and condition, meaning A Bank applies a thorough approach in evaluating the credit applications. Employees also agree that the credit appraisal process is effective in predicting the repayment capacity of the borrowers, reflecting a strong confidence of the bank in assessing repayment risk.

### **3. Market Risk Analysis**

To analyze market risk analysis, five questions are asked of the 169 employees of A Bank. The mean values, standard deviations and overall mean value for market risk analysis are shown in Table (4.3) as follows.

**Table (4.3) Market Risk Analysis**

<b>Sr. No.</b>	<b>Description</b>	<b>Mean</b>	<b>Standard Deviation</b>
1	The bank regularly analyzes market risks such as interest rate and exchange rate fluctuations.	3.97	0.59
2	Market trends, including inflation and currency shifts, are actively considered in credit decision-making.	4.04	0.57
3	The institution utilizes tools such as stress testing and scenario analysis to assess market risk.	4.06	0.54
4	Market risk analysis has contributed to reducing credit losses or restructuring high-risk loans.	3.88	0.59
5	Market risk indicators are well integrated into the bank's overall credit risk management system.	3.93	0.67
<b>Overall Mean Value</b>		<b>3.98</b>	

Source: Survey Data (2025)

According to Table (4.3), the mean values (including overall mean) fall between 3.41 and 4.20 at agree level. This indicates that most respondents agree with market risk analysis statements of A Bank. Employees at A Bank agree that the bank use methods like stress testing and scenario analysis for market risk assessment, highlighting strong capability of the bank in estimating economic conditions. Moreover, employees agree that market trends like inflation and currency shifts are considered in the credit related decision-making, reflecting decisions are based on real-time financial realities. The employees also agree that market risks like interest rate and exchange rate fluctuations are analyzed regularly, matching that the bank considers volatile financial market conditions into the risk strategy. At A Bank, market risk indicators are well integrated into the overall credit risk management system. The employees also agree that market risk analysis has contributed towards reducing credit losses and high-risk loans.

#### 4.1.2 Employee Perception on Credit Risk Management at A Bank

To analyze credit risk management, five questions are asked of the 169 employees of A Bank. The mean values, standard deviations and overall mean value for credit risk management are shown in Table (4.4) as follows.

**Table (4.4) Credit Risk Management**

<b>Sr. No.</b>	<b>Description</b>	<b>Mean</b>	<b>Standard Deviation</b>
1	The bank has an effective risk management framework of infrastructure, processes and policies to manage credit risk.	4.24	0.60
2	A comprehensive credit appraisal process contributes significantly to effective credit risk management and bank profitability.	4.08	0.61
3	Accurate market risk analysis supports credit risk management in reducing loan defaults and improving bank performance.	3.98	0.70
4	When environmental risk, credit appraisal, and market risk analysis are aligned, the credit risk management process becomes more effective.	3.68	0.74
5	The combined application of environmental risk assessment, credit appraisal measurement, and market risk analysis strengthens the performance outcomes of the bank through robust credit risk management.	4.04	0.69
<b>Overall Mean Value</b>		<b>4.00</b>	

Source: Survey Data (2025)

According to Table (4.4), the mean values except 4.24 (including overall mean value) fall between 3.41 and 4.20. This indicates that most of the respondents agree with the statements of credit risk management and They also recognize that a comprehensive credit appraisal process contributes towards effective credit risk management and profitability for the bank. They also agree that credit risk management system including of environmental risk

assessment, credit appraisal measurement and market analysis are beneficial for improving performance outcomes of the bank. They agree that in enhancing the bank performance, accurate market risk analysis is helpful in reducing loan defaults. They agree that aligning environmental risk, credit appraisal and market risk analysis improves the effectiveness of the credit risk management process.

According to the mean value between 4.21 and 5.00, the respondents also strongly agree with the statement of credit risk management. The employees strongly agree that the bank has an effective risk management framework including infrastructure, processes and policies for strong credit risk control.

#### 4.1.3 Employee Perception on Performance of A Bank

To analyze performance of commercial bank, five questions are asked of the 169 employees of A Bank. The mean values, standard deviations and overall mean value for performance of commercial bank are shown in Table (4.5) as follows.

**Table (4.5) Performance of Commercial Bank**

<b>Sr. No.</b>	<b>Description</b>	<b>Mean</b>	<b>Standard Deviation</b>
1	The bank consistently achieves high levels of productivity.	3.96	0.56
2	The bank has been delivering excellent customer satisfaction.	4.14	0.54
3	The bank responds to market changes swiftly.	3.98	0.58
4	The bank has improved its operational performance.	4.20	0.41
5	The bank is achieving its goals and objectives.	3.97	0.57
<b>Overall Mean Value</b>		<b>4.05</b>	

Source: Survey Data (2025)

According to Table (4.5), the mean values (including overall mean) fall between 3.41 and 4.20 at agree level. This indicates that most respondents agree with performance of commercial bank statements of A Bank. The employees agree that A Bank has improves its

operational performance, reflecting ongoing improvement in efficiency and effectiveness. They also agree that the bank has been providing excellent customer satisfaction, also reflecting the commitment of the bank in meeting the needs of the clients. Additionally, they agree that the bank is able to respond to market changes swiftly, demonstrating the agility of the bank. They also agree that the bank has high levels of productivity, strengthening the operational strength of the bank. Lastly, the respondents agree that A Bank is achieving the goals and objectives.

#### **4.2 Analysis on the Effect of Determinants of Credit Risk Management on Credit Risk Management at A Bank**

This section presents an analysis of effect of the determinants of credit risk management on credit risk management of A Bank. As a first step, the direct effect of the determinants of credit risk management (independent variables) on credit risk management (dependent variable) is analyzed. The result is shown in Table (4.6).

**Table (4.6) Effect of Determinants of Credit Risk Management on Credit Risk Management at A Bank**

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	VIF
	B	Std. Error	Beta			
(Constant)	2.436	0.315		7.733	0.000	
Environmental Risk	0.368***	0.054	0.473	6.762	0.000	1.199
Credit Appraisal Measurement	0.104**	0.048	0.139	2.167	0.032	1.011
Market Risk Analysis	0.117**	0.056	0.145	2.077	0.039	1.194
R	0.572					
R Square	0.327					
Adjusted R Square	0.315					
Durbin-Watson	1.887					
F Value	26.723***					

Source: Survey Data (2025)

Note: \*Significant at 1% level, \*\*Significant at 5% level, \*\*\*Significant at 10% level

Based on Table (4.6), R value is 0.572 and R Square value is 0.327. it means the study model can explain the variation in credit risk management of A Bank well. As the adjusted R Square value is 0.315, the model is able to explain 31.5% when it comes to the variance of both the independent variables and the dependent variables. All the VIF values are also under 10, suggesting the lack of multicollinearity issues with the independent variables. With the Durbin-Watson value of 1.887, the sample does not consist autocorrelation issue. Based on the F value, the overall model is highly significant at 1% level and can regard that the model of the study is valid.

It is found that environmental risk has a positive and significant effect on credit risk management at a 1% significance level, meaning that including environment assessments like financial exposure to climate-related events or compliance with regulatory requirements makes

the bank to be able to come up with more informed lending decisions. As a result, A bank is able to estimate long-term sustainability of the borrowers and minimize the default risk of them, effectively enhancing the risk management capability of the bank.

Credit appraisal measurement has a positive and significant effect on credit risk management at a 5% significance level, implying the strong risk appraisal methods like thorough borrower evaluations and analysis of the collateral enhances the ability of A bank in correctly assessing and analyzing the creditworthiness of the borrowers. This in turn leads to improved quality of the loans, reduced non-performing loans and a credit portfolio that is more resilient towards other environmental factors.

Market risk analysis has a positive and significant effect on credit risk management at a 5% significance level, meaning that consistent monitoring of market risk factors including interest rates, economic trends and financial markets lead to stronger and more accurate analysis and forecast of credit risk management. This enables A bank to adjust lending strategies proactively in response to market volatility and maintain financial stability.

In conclusion, A Bank ensures effective credit risk management by implementing three essential dimensions which are environmental risk, credit appraisal measurement, and market risk analysis. The bank integrates environmental risk considerations into its lending decisions to ensure that social, environmental, and regulatory factors are effectively addressed, in order to reduce long-term exposure and improving loan quality. It also practices a strong credit appraisal system that evaluates borrower capacity and financial condition through consistent procedures and data-based assessments. Moreover, market risk analysis includes in the bank's operations, enabling swift responses to macroeconomic changes such as interest rate fluctuations and currency rate fluctuations.

### **4.3 Analysis on the Effect of Credit Risk Management on Performance of A Bank**

This section presents an analysis of the effect of credit risk management on performance of A Bank. The effect of credit risk management (independent variable) on performance of commercial bank (dependent variable) is analyzed. The result is shown in Table (4.7).

**Table (4.7) Effect of Credit Risk Management on Performance of A Bank**

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	VIF
	B	Std. Error	Beta			
(Constant)	0.538	0.211		2.546	0.012	
Credit Risk Management	0.891***	0.053	0.791	16.704	0.000	1.000
R	0.791					
R Square	0.626					
Adjusted R Square	0.623					
Durbin-Watson	1.5					
F Value	279.016***					

Source: Survey Data (2025)

Note: \*Significant at 1% level, \*\*Significant at 5% level, \*\*\*Significant at 10% level

Based on Table (4.7), R value is 0.791 and R Square value is 0.626. it means the study model can explain the variation in performance of commercial bank of A Bank well. As the adjusted R Square value is 0.623, the model is able to explain 62.3% when it comes to the variance of both the independent variables and the dependent variables. All the VIF values are also under 10, suggesting the lack of multicollinearity issues with the independent variables. With the Durbin-Watson value of 1.5, the sample does not consist autocorrelation issue. Based on the F value, the overall model is highlight significant at 1% level and can regard that the model of the study is valid.

The significant value of credit risk management is 0.000, hence, it is significant at 1% level. The Standardized Coefficient (Beta) values of the variable is positive, showing that credit risk management has a significant and positive effects on performance of commercial bank of A Bank. It means performance of commercial bank of A Bank is contributed by credit risk management.

Credit risk management plays a crucial role in enhancing the performance of A Bank. Effective credit risk practices help minimize the occurrence of loan defaults and non-performing assets, thereby strengthening the financial stability of the bank. By proactively identifying and mitigating potential credit losses, the bank can safeguard its capital, support sustainable lending, and improve overall operational efficiency. This strategic approach not only maintains asset quality but also enables more efficient allocation of financial resources, contributing to long-term profitability and growth.

## **CHAPTER 5**

### **CONCLUSION**

This chapter addresses findings and discussions, suggestions and recommendations and further research of the study of the determinants of credit risk management and performance of A Bank.

#### **5.1 Findings and Discussions**

The study aims to examine the determinants of credit risk management and performance of A Bank. A total of 169 employees who are employed at A Bank participated in the survey.

Based on the results of the demographic profile, female employees outnumber male employees, indicating that A Bank has a higher female participation in its workforce. The age distribution shows that most employees belong to the young to middle-aged group. The marital status of employees is nearly balanced between single and married individuals. Regarding educational background, the majority of A Bank employees hold higher education degrees. The employment positions include a mix of operational and managerial roles. In terms of years of service, the workforce consists of both experienced staff and new recruits. Lastly, A Bank offers competitive and attractive compensation packages across all employee levels.

The mean value analysis of the environmental risk indicates that the respondents agree with environmental risk statements regarding A Bank. Employees agree that the credit assessment process includes environmental risks considerations such as climate change, natural disasters, and resource intensity through Environmental and Social Risk Assessment (ESRA) framework. Employees also agree that regulatory and political changes are included in the credit policy via the Environmental Risk Committee and policy review. Moreover, employees agree that linking environmental risk analysis to loan assessment has lowered non-performing loan (NPL) rates like the usage of predictive analytics and stress tests. They further agree that the bank regularly adjusts credit policies to reflect macro-environmental shifts like improving scrutiny in regions where flood frequency is rising. Lastly, employees agree that

borrowers in environmentally sensitive sectors face extra checks like agriculture sector for example.

The mean value analysis of the credit appraisal measurement indicates that the respondents also agree with credit appraisal measurement of A Bank. At A Bank, they agree that that initiatives such as digital credit-scoring engines and cash-flow-based scenario testing have reduced non-performing loans by alerting high-risk cases early and leading to senior credit committees. They also agree that the appraisal process is based on the five classic “Cs”. Because these standards are integrated in uniform templates, checklists, and scorecards across all branches and reinforced through regular training and internal-audit file reviews, employees experience the same clear rules. Finally, they agree that the appraisal findings utilizes real-time tax and transaction data to estimate default risk effectively, while tenor, grace-period, and collateral buffers are tailored to match genuine repayment capacity.

The mean value analysis of the market risk analysis indicates that the respondents also agree with market risk analysis statements of A Bank. At A Bank, employees agree that market risk assessment is integrated in both treasury operations and credit decision-making via systematic tools and transparent processes. At A bank, quarterly stress testing and scenario analysis are led by the Asset & Liability Committee (ALCO), simulating events like currency crashes, interest-rate spikes, and sudden liquidity squeezes. These simulations are directly linked to contingency funding strategies and daily Value-at-Risk (VaR) models, which are continuously refined and validated by internal audit and market-risk teams. Employees also agree that inflation trends and FX movements also integrated into the credit-approval process. Real-time risk dashboards enable credit officers with key macro indicators such as CPI projections and central bank rate signals. Employees also agree that day-to-day market fluctuations particularly in interest rates and foreign exchange are monitored closely. Moreover, staff agree that market intelligence is integrated with credit-risk management systems. In addition, credit market-risk analysis prevents credit losses.

The mean value analysis of the credit risk management indicates that with the exception of the statements of A bank having effective risk management framework, the respondents also agree with the statements of credit risk management. Respondents agree that a comprehensive credit appraisal process is beneficial for effective credit risk management and profitability.

Employees agree that performance outcomes of the bank are improved due to credit risk management system including environmental risk assessment, credit appraisal measurement and market analysis. They also agree that loan defaults are reduced through accurate market risk analysis and that the effectiveness of credit risk management process is improved by aligning the environmental risk analysis, credit appraisal and market risk analysis with the process. However, the employees strongly agree that the bank has an effective risk management framework including infrastructure, processes and policies for strong credit risk control.

The mean value analysis of the performance of commercial bank indicates that employees also agree with the performance of commercial bank statements. Employees agree that A bank has improves its operational performance, reflecting ongoing improvement in efficiency and effectiveness. They also agree that the bank has been providing excellent customer satisfaction while responding to market changes swiftly. They also agree that the bank has high levels of productivity, strengthening the operational strength of the bank. Additionally, the respondents agree that A bank is achieving the goals and objectives effectively.

According to the regression analysis, environmental risk, credit appraisal measurement and market risk analysis have positive and significant effect on credit risk management of A Bank. This implies that credit risk management practices are significantly strengthened when these three components are effectively implemented.

According to the results, environmental risk has a positive and significant effect on credit risk management of A Bank. When the borrowers are involved in environmentally harmful or unsustainable practices, they can face legal penalties and the businesses can get affected by environmental risk factors when they operate in environmentally sensitive areas. By integrating environmental risk assessments into the lending process, A Bank is able to avoid environmentally vulnerable or non-compliant borrowers, thereby reducing potential defaults, penalties and reputational damage. This is especially important in sectors including agriculture or manufacturing where the environmental impacts are significant.

According to the results, credit appraisal measurement has a positive and significant effect on credit risk management of A Bank. A strong credit appraisal measurement system is

the foundation of sound lending decisions. It ensures that loans are only granted to borrowers with strong repayment capacity, stable income sources and credible financial history. Practices that includes in-depth borrower analysis, financial evaluations, and the ‘5 Cs’ of credit helps ensure that only creditworthy clients receive financing. The bank is able to build a comprehensive buyer profile and also anticipate potential risks and make appropriate protection for them.

According to the results, market risk analysis has a positive and significant effect on credit risk management of A Bank. The incorporation of market risk analysis enables the bank to predict adverse conditions and adjust credit decisions accordingly. Economic aspects like interest rate changes, currency fluctuations and changes in demand and prices can affect the repayment ability of the borrowers. By conducting effective market risk analysis, it can result in more strengthened risk management, reducing loan losses and strengthening the overall credit portfolio through the adjustment of credit exposure, diversification of the portfolio and implementation of early detection system.

According to the results, credit risk management also has a positive and significant effect on performance of A Bank. This indicates that effective management of credit risk not only reduces the likelihood of loan defaults and non-performing loans but also enhances the overall financial health and stability of the organization. Solid credit risk management supports sustainable lending practices, reduces loss of capital value, allowing the bank to allocate resources more efficiently.

The findings confirm that environmental risk, credit appraisal, and market risk analysis significantly enhance credit risk management, which in turn positively affects A Bank’s performance. Strengthening these areas will help A Bank improve loan quality, reduce defaults, and sustain long-term financial stability.

## **5.2 Suggestions and Recommendations**

Based on the findings of the determinants of credit risk management and performance of A Bank, the following suggestions and recommendations are provided.

To enhance the effectiveness of environmental risk management, A Bank should deepen the integration of environmental considerations into its credit decision-making processes. This involves expanding the existing Environmental and Social Risk Assessment (ESRA) framework to include real-time data, climate vulnerability maps, and localized environmental indicators. Regular training programs for credit officers and risk analysts are essential to keep them updated on environmental regulations and risk evaluation tools. Additionally, collaborating with external environmental consultants for high-risk sectors like agriculture, and infrastructure can ensure stricter due diligence and minimize exposure to environmental risks.

For credit appraisal measurement, improving the quality and consistency of credit appraisal processes is crucial for managing credit risk effectively. A Bank should continue to enhance its credit-scoring systems by incorporating lessons learned from past defaults and performance data. Application of digital tools and AI-driven credit engines can provide more accurate borrower assessments and flag high-risk applications in real-time. Standardizing credit appraisal practices across all branches through unified templates and regular training workshops will further strengthen consistency and reduce subjectivity in loan evaluations.

To better manage market risk, A Bank should increase the responsiveness and analytical depth of its market risk monitoring systems. This includes conducting more frequent stress tests and scenario analyses that simulate interest rate shifts, currency fluctuations, and liquidity squeezes. Incorporating predictive analytics into risk dashboards can help credit and treasury teams anticipate adverse trends and adjust loan pricing, and exposure limits accordingly. Regular updates and reviews of market data at ALCO meetings should directly influence credit policy and decision-making.

A more integrated and proactive approach to credit risk management will help A Bank remain resilient amid evolving risks. Cross-functional collaboration between environmental, credit, and market risk teams should be done to enable holistic credit reviews. Moreover, updating the risk appetite statements and credit exposure limits in response to changing economic conditions will ensure that the credit risk strategy remains adaptive and aligned with organizational goals. Sustaining high bank performance requires aligning performance KPIs with risk management improvements.

### **5.3 Needs for Further Research**

This study is conducted with 169 employees of A Bank, and the study aims to research the determinants of credit risk management and performance of A Bank. As it only focuses on A Bank, it does not represent the financial sector or banking sector as a whole. Future studies with bigger sample sizes can be conducted to increase the data representation. Moreover, future studies with longitudinal approaches can be conducted. The current study only focuses on credit risk management practices, other variables and dimensions can be used for further studies like internal factors, customer related variables, risk management process indicators and so on. By doing further research, credit risk management and their influencing factors can be understood on a wider scale and the organizations can also strategize the best practices based on the findings.

## REFERENCES

- Abdullah , Asrida , M., Ahmad , A., Nayan, N. A., Azhar , Z., & Ahmad , A.-R. (2020). Credi risk assessment models of retail microfinancing: The case of a Malaysian national savings bank's branch . *International Journal of Financial Research* , 11(1), 73-83.
- Ab-Hamid, M. F., Janor , H., Abdul-Rahman , A., & Abdul-Majid , M. (2021). The effects of efficiency on banks' market risk: Empirical evidence from China . *Asian Academy of Management Journal of Accounting and Finance* , 17(2), 81-106.
- Abubakar , A. A., Sulaiman, A., Usman , B., & Mohammed , M. U. (2019). Credit risk management and financial performance of quoted deposit money banks in Nigeria . *Journal of Finance, Accounting and Management* , 10(1), 57-74.
- Accornero, M., Cascarino, G., Felici, R., Parlapiano, F., & Sorrentino, A. M. (2018). Credit risk in banks' exposures to non-financial firms . *European Financial Management* , 24(5), 775-791.
- Afolabi , Sola , T., Obamuyi, T. M., & Egbetunde , T. (2020). Credit risk and financial performance: Evidence from microfinance banks in Nigeria . *IOSR Journal of Economics and Finance* , 11(1), 8-15.
- Afriyie, H. O., & Akotey, J. O. (2012). *Credit risk management and profitability of selected rural banks in Ghana*. Catholic University College of Ghana.
- Ahmad, N., Mobarek, A., Roni, N. N., & Tan , A. W. (2021). Revisiting the impact of ESG on financial performance of FTSE350 UK firms: Static and dynamic panel data analysis . *Cogent Business & Management* , 8(1), 1-18.
- Aman , F. (2019). Measurement of credit appraisal system in banking sector - A study of SBI Bank, Hisar. *Journal of Advances and Scholarly Researches in Allied Education*, 16(4), 631-635.
- Antunes, R., & Gonzalez, V. (2015). A production model for construction: A theoretical framework . *Buildings* , 5(1), 209-228.

- Ab-Hamid, M. A., Abdullah, F., Kamarudin, F., & Ismail, M. (2017). Market risk disclosures and their determinants: Evidence from Malaysian listed firms. *International Journal of Economics and Management*, 11(S2), 415–431.
- Altman, E. I., & Saunders, A. (1998). Credit risk measurement: Developments over the last 20 years. *Journal of Banking & Finance*, 21(11–12), 1721–1742.
- Altman, E. I., Resti, A., & Sironi, A. (2008). *Credit Risk Management: How to Avoid Lending Disasters and Maximize Earnings* (2<sup>nd</sup> ed.). Hoboken, NJ: Wiley Finance.
- Aruwa, S. A., & Musa, A. O. (2014). Risk components and the financial performance of deposit money banks in Nigeria . *International Journal of Social Sciences and Entrepreneurship*, 1(11), 514-522.
- Baker , P. (2023, September 3). *Part 1: Building WynePay to address financial inclusion in Myanmar*.
- Bank for International Settlements . (1999). *A new capital adequacy framework* . Basel: Committee on Banking Supervision .
- Battiston, S., Mandel, A., Monasterolo, I., Schutze, F., & Visentin, G. (2017). A climate stress-test of the financial system. *Nature Climate Change* , 7(1), 283-288.
- Berger , A. N., DeYoung , R., & . (1997). Problem loans and cost efficiency in commercial banks . *Journal of Banking and Finance* , 21(1), 849-870.
- Basel Committee on Banking Supervision. (2011). *Principles for the sound management of operational risk*. Bank for International Settlements.
- Beck, T., & Demirgüç-Kunt, A. (2006). Small and medium-size enterprises: Access to finance as a growth constraint. *Journal of Banking & Finance*, 30(11), 2931–2943.
- Bessis, J. (2015). *Risk Management in Banking* (4<sup>th</sup> ed.). Chichester, UK: Wiley.
- Bhatt , T. K., Ahmed, N., Iqbal, M. B., & Ullah, M. (2023). Examining the determinants of credit risk management and their relationship with the performance of commercial banks in Nepal. *Journal of Risk and Financial Management* , 16(235), 1-23.
- Breitenstein, M., Nguyen , D. K., & Walther , T. (2021). Environmental hazards and risk management in the financial sector: A systematic literature review . *Journal of Economic Surveys* , 35(2), 512-538.

- Coulson, A. B., & Dixon, R. (1995). Environmental risk and management strategy: The implications for financial institutions. *International Journal of Bank Marketing* , 13(1), 22-29.
- Das, N., Dutta, A., & Sengupta, P. P. (2022). Environmental risk and corporate financial performance: The moderating role of environmental disclosure. *Business Strategy and the Environment*, 31(1), 396–414.
- Deng, Y., & Landicho, B. M. (2024). Determinants of credit risk management and their relationship with the performance of commercial banks in Guangdong China . *International Journal of Global Economics and Management* , 4(1), 1-14.
- Cambridge Centre for Sustainable Finance . (2016, September 2). *Environmental risk analysis by financial institutions - a review of global practice* . Retrieved from Tech. Rep., Cambridge Institute for Sustainability Leadership.
- Caouette , J., Coauette , J. B., Altman , E. I., & Narayanan, P. (1998). *Managing credit risk: The next great financial challenge* . New Jersey: John Wiley & Sons, Inc.
- Caselli, G., & Migliorelli, M. (2024). Physical risk from climate change and local banks' lending: What lies ahead. *The European Money and Finance Forum*, 1(339), 1-6.
- Catherine , N. (2020). Credit risk management and financial performance: A case of Bank of Africa (U) Limited . *Open Journal of Business and Management* , 8(1), 30-38.
- Christoffersen, P. (2011). *Elements of financial risk management* . Cambridge: Academic Press.
- Elgestad Stjernfeldt, P., Sjögren, P., Wårdh, i., & Boström, A. M. (2019). A systematic review of measurement properties of methods for objectively assessing masticatory performance. *Clinical and Experimental Dental Research*, 5(1), 76-104.
- Engels , E. A., Pfeiffer, R. M., Fraumeni, J. F., Kasiske, B. L., Israni, A. K., & Snyder , J. J. (2011). Spectrum of cancer risk among US solid organ transplant recipients . *JAMA* , 306(1), 1891-1901.
- Ferrouhi, E. M. (2018). Determinants of banks' profitability and performance: An overview. *MPRA Paper*, 1(1), 1-15.

- Finger, M., Gaviious, I., & Manos, R. (2018). Environmental risk management and financial performance in the banking industry: A cross-country comparison. *Journal of International Financial Markets, Institutions and Money*, 52, 240–261.
- Frost, J., Gambacorta, L., Huang, Y., Shin, H. S., & Zbinden, P. (2019). *BigTech and the changing structure of financial intermediation*.
- Greuning, H. V., & Bratanovic, S. B. (2009). *Analyzing Banking Risk: A Framework for Assessing Corporate Governance and Risk Management* (3<sup>rd</sup> ed.). Washington, DC: The World Bank.
- Galletta, S., Mazzu, S., Naciti, V., & Vermiglio, C. (2022). Gender diversity and sustainability performance in the banking industry. *Corporate Social Responsibility and Environmental Management*, 29(1), 161-174.
- Geitangi, D. M. (2015). *The relationship between credit risk management practices and performance of loan portfolio of commercial banks in Kenya*. University of Nairobi.
- Ghosh, A. (2015). Banking-industry specific and regional economic determinants of non-performing loans: evidence from US states . *Journal of Financial Stability* , 20(1), 93-104.
- Griffin, M. (2003). *Organizational performance model* .
- Hanh , My , P. T., Hang, N. T., & Huy, D. T. (2021). Enhancing roles of banks and the comparison of market risk and risk policy implications in group of listed Vietnam banks during 2 stages: Pre and post-low inflation period . *Revista Geintec-Gestao Inovacao e Tecnologias*, 11(1), 1723-1735.
- Höck, A., Klein, C., Landau , A., & Zwergel , B. (2020). The effect of environmental sustainability on credit risk . *Journal of Asset Management* , 21(1), 85-93.
- Hughes, J., & Mester, L. (2015). *Measuring the performance of banks: Theory, practice, evidence and policy implications* . Oxford University Press.
- International Finance Corporation. (2021). *Moving forward with environmental and social risk management: Findings from IFC country baseline surveys*. World Bank Group.
- Jorion, P. (2007). *Value at Risk: The New Benchmark for Managing Financial Risk* (3<sup>rd</sup> ed.). New York: McGraw-Hill.

- Kaaya, I., & Pastory, D. (2013). Credit risk and commercial banks performance in Tanzania: A panel data analysis . *Research Journal of Finance and Accounting* , 4(1), 55-62.
- Khalid, Abdelhakeem, A., Hassan , W. A., Ibrahim, N. A., Abdalla , Y. A., Ahmed, I. E., & Sarea , A. M. (2021). The impact of credit risk management on the financial performance of banking sector in Sudan . *Academy of Accounting and Financial Studies Journal* , 25(1), 1-11.
- Kithinji, A. (2010). Credit risk management and profitability of commercial banks in Kenya . *Research Journal of Finance and Accounting* , 3(2), 6-15.
- Li , M. (2020). Risk management problems of commercial banks under interest rate marketization . *Finance and Accounting Study* , 31(1), 141-142.
- Li , X. (2018). Analysis of financial market and risk management of commercial banks. *Langfang Applied Economics Society* , 1(1), 154-161.
- Laeven, L., & Levine, R. (2009). Complex ownership structures and corporate valuations. *Review of Financial Studies*, 21(2), 579–604.
- Liu, N., Jin , X., Feng , C., Wang , Z., Wu , F., Johnson, A. C., Geisy, P. (2020). Ecological risk assessment of fifty pharmaceuticals and personal care products (PPCPs) in Chinese surface waters: A proposed multiple-level system. *Environment International* , 16(1), 105-134.
- Liu, Y., Wang, Y., & Li, X. (2020). Corporate environmental responsibility and financial performance: The mediating role of environmental risk management. *International Review of Financial Analysis*, 71, 101–120.
- Muriithi, J. G., Muturi, W. M., & Waweru, K. M. (2016). The effect of market risk on financial performance of commercial banks in Kenya. *International Journal of Risk Management* , 4(4), 225-233.
- Ma , C. (2020). Discussion on comprehensive risk management of financial market business of commercial banks . *Times Finance* , 26(1), 34-35.
- Martens , David , B. B., Baesens , B., & Gestel, T. V. (2008). Decompositional rule extraction from support vector machines by active learning . *IEEE Transactions on Knowledge and Data Engineering* , 21(1), 178-191.

- Naili, M., & Lahrichi, Y. (2022). The determinants of banks' credit risk: Review of the literature and future research agenda. *International Journal of Finance & Economics* , 27(1), 334-360.
- Nizam, E., Nawawi, A., & Salin, A. S. A. P. (2019). Environmental risk management practices and corporate financial performance: The moderating effect of environmental, social & governance disclosure. *Sustainability*, 11(12), 3304.
- Ndyagyenda , C. (2020). Credit risk management and financial performance: A case of Bank of Africa (U) Limited. *Open Journal of Business and Management* , 8(1), 30-38.
- Noory, Najihah, S., Shahimi, S., & Ismail, A. G. (2021). A systematic literature review on the effects of risk management practices on the performance of Islamic Banking Institutions . *Asian Journal of Accounting and Governance* , 16(1), 53-75.
- Oudat, S. M., & Ali, B. J. (2021). The Underlying Effect of Risk Management On Banks' Financial Performance: An Analytical Study on Commercial and Investment Banking in Bahrain. *Ilkogretim Online*, 20(1), 404-414.
- , V., & Sharpanskykh, A. (2010). Modeling organizational performance indicators . *Information systems* , 35(4), 505-527.
- Rajendran, R. (2022). Credit risk is indicated by the number of subpar loans, nonperforming loans, problematic loans and loan loss reserves of the banks (Naili & Lahrichi, 2022). *Specialusis Ugdymas*, 1(1), 1728-1738.
- Saleem, A., Bárczi, J., & Sági, J. (2021). COVID-19 and Islamic Stock Index: Evidence of Market Behavior and Volatility Persistence. *Journal of Risk and Financial Management*, 14(8), 389.
- Saunders, A., & Allen, L. (2010). *Credit risk management in and out of the financial crisis: New approaches to value at risk and other paradigms* (3<sup>rd</sup> ed.). Wiley.
- Saunders , A., & Cornett , M. M. (2017). *Financial institutions management: A risk management approach*. McGraw-Hill Education .
- Scholtens , B. (2006). Finance as a driver of corporate social responsibility. *Journal of Business Ethics* , 68(1), 19-33.

- Stockport , G., Perryer , C., Keane , M., & Ardrey , W. (2009). *Prudential supervision, banking and economic progress: Implementation of risk management procedures in joint stock banks in Vietnam* .
- Sun , X., & Wang , H. (2017). Risk management research on financial market business of small and medium-sized commercial banks . *China International Finance and Economics* , 21(1), 236-237.
- Tao, Z. (2024). An analysis of market risk management in commercial banks . *Financial Engineering and Risk Management* , 7(5), 36-42.
- Taouab, O. (2019). Firm performance: Definition and measurement models. *European Scientific Journal* , 15(1), 93-106.
- Tetteh, E. K. (2017). *Utilization of microfinance loan among clients of the upper Menya Krobo Rural Bank of the Easter region of Ghana*. University of Cape Coast.
- Thisika, L. M., & Muturi , W. (2017). Effects of credit risk management on loan performance in Kenyan Commercial Banks . *Journal of Economics, Commerce and Management* , 5(1), 486-496.
- Ugah , J. (2020). Financial risks management and bank profitability in Nigeria: Case of access Bank of Nigeria plc. *International Journal of Research and Innovation in Social Science* , 1(1), 183-190.
- Velliscig , Giulio, Floreani, J., & Polato , M. (2022). Capital and asset quality implications for bank resilience and performance in the light of NPLs' regulation: A focus on the Texas ratio. *Journal of Banking Regulation* , 1(1), 1-23.
- Venkatraman, N., & Ramanujam, V. (1986). Measurement of business performance in strategy research: a comparison approaches . *Academy of Management Review* , 11(1), 801.
- World Bank. (2022). *Myanmar financial sector reforms* . The World Bank.
- Xue, H. (2019). Commercial bank market risk management logic and practice. *Financial Electronic*, 11(1), 32-34.

## APPENDIX A

### SURVEY QUESTIONNAIRE

#### **“Determinants of Credit Risk Management and Performance of A Bank”**

The survey is a partial fulfilment of the requirements of Masters of Business Administration Degree. All the information collected will be used for academic purposes only. Confidentiality and anonymity are assured. Your response is highly appreciated. Thank you for your precious time and participation.

#### **Section A: Demographic Information**

Instruction: Please choose the most relevant answer by ticking (✓) only one of the boxes provided for each question.

1. What is your gender?

- Male
- Female

2. What is your age group?

- Under 20 years
- 20 years to 30 years
- 31 years to 35 years
- 36 years to 45 years
- 46 years and above

3. What is your marital status?

- Single
- Married

4. What is your highest level of education?

- Undergraduate
- Graduate
- Master Degree
- Doctorate Level

5. What is your employment position?

- Associate / Senior Associate
- Assistant Supervisor / Supervisor
- Manager / Senior Manager
- Assistant General Manager / General Manager
- Above General Manager

6. What is your year of bank services?

- Less than 1 year.
- 1 years ~ 3 years
- 3 year ~ 5 years.
- Above 5 years

7. How much is your monthly income?

- Below 300,000 ks
- 300,001 ks ~ 600,000 ks
- 600,001 ks ~ 900,000 ks.
- 900,001 ks ~ 1,200,000 ks
- 1,200,001 Ks ~ 1,500,000 ks
- 1,500,000 ks and Above

## Section B: Determinants of Credit Risk Management

Instruction: Based on the scale below, please tick (  ) the number of your choice to indicate the extent you agree or disagree with the statement.

( Strongly Disagree = 1 , Disagree = 2 , Neutral = 3 , Agree = 4 , Strongly Agree = 5 )

### Environmental Risk

No.	Questions	1	2	3	4	5
1.	Regulatory and political changes significantly influence the loan approval decisions					
2.	Bank credit assessment process includes evaluations of environmental risks, such as climate change and natural disasters.					
3.	Bank regularly adjust our credit policies in response to macroeconomic and environmental changes.					
4	Borrowers from environmentally vulnerable sectors are subject to additional environmental risk assessments.					
5	Considering environmental risks in credit assessments helps reduce the institution's non-performing loan (NPL) rates					

### Credit Appraisal Measurement

No.	Questions	1	2	3	4	5
1.	The bank's credit appraisal process is effective in predicting the borrower's repayment capacity					
2.	The credit appraisal system includes a comprehensive assessment of the "5 Cs" – Character, Capacity, Capital, Collateral, and Conditions.					
3.	Improvements in credit appraisal practices have resulted in a reduction in loan defaults					
4.	Credit appraisal standards are consistently applied across all branches and departments					
5.	A strong credit appraisal process contributes to a healthier and more stable loan portfolio					

### Market Risk Analysis

No.	Questions	1	2	3	4	5
1.	The bank regularly analyzes market risks such as interest rate and exchange rate fluctuations.					
2.	Market trends, including inflation and currency shifts, are actively considered in credit decision-making					
3.	The institution utilizes tools such as stress testing and scenario analysis to assess market risk.					
4.	Market risk analysis has contributed to reducing credit losses or restructuring high-risk loans.					
5.	Market risk indicators are well integrated into the bank's overall credit risk management system.					

### Section C: Credit Risk Management

Instruction: Based on the scale below, please tick (  ) the number of your choice to indicate the extent you agree or disagree with the statement.

( **Strongly Disagree = 1** , **Disagree = 2** , **Neutral = 3** , **Agree = 4** , **Strongly Agree = 5** )

No.	Questions	1	2	3	4	5
1.	The bank has an effective risk management framework of infrastructure, processes and policies to manage credit risk.					
2.	A comprehensive credit appraisal process contributes significantly to effective credit risk management and bank profitability.					
3.	Accurate market risk analysis supports credit risk management in reducing loan defaults and improving bank performance.					
4.	When environmental risk, credit appraisal, and market risk analysis are aligned, the credit risk management process becomes more effective					

5.	The combined application of environmental risk assessment, credit appraisal measurement, and market risk analysis strengthens the performance outcomes of the bank through robust credit risk management.					
----	---	--	--	--	--	--

**Section D: Bank Performance**

Instruction: Based on the scale below, please tick (  ) the number of your choice to indicate the extent you agree or disagree with the statement.

( **Strongly Disagree = 1** , **Disagree = 2** , **Neutral = 3** , **Agree = 4** , **Strongly Agree = 5** )

No.	Questions	1	2	3	4	5
1.	The bank consistently achieves high levels of productivity.					
2.	The bank has been delivering excellent customer satisfaction.					
3.	The bank responds to market changes swiftly.					
4.	The bank has improved its operational performance.					
5.	The bank is achieving its goals and objectives.					

**APPENDIX B**  
**STATISTICAL OUTPUT**

**Environmental Risk**

**Reliability Statistics**

<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>N of Items</b>
.847	.850	5

**Item Statistics**

	<b>Mean</b>	<b>Std. Deviation</b>	<b>N</b>
ER1	3.9763	.51122	169
ER2	4.0769	.48795	169
ER3	3.9527	.59573	169
ER4	3.9172	.64013	169
ER5	3.9645	.58649	169

**Credit Appraisal Measurement**

**Reliability Statistics**

<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>N of Items</b>
.784	.786	5

**Item Statistics**

	<b>Mean</b>	<b>Std. Deviation</b>	<b>N</b>
CAM1	4.0592	.67880	169
CAM2	4.0828	.62125	169
CAM3	4.1065	.60790	169
CAM4	4.0651	.59903	169
CAM5	4.0888	.66220	169

## Market Risk Analysis

### Reliability Statistics

<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>N of Items</b>
.775	.781	5

### Item Statistics

	<b>Mean</b>	<b>Std. Deviation</b>	<b>N</b>
MRA1	3.9704	.59187	169
MRA2	4.0355	.56583	169
MRA3	4.0592	.54231	169
MRA4	3.8757	.58954	169
MRA5	3.9349	.66496	169

## Credit Risk Management

### Reliability Statistics

<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardized Items</b>	<b>N of Items</b>
.778	.786	5

### Item Statistics

	<b>Mean</b>	<b>Std. Deviation</b>	<b>N</b>
CRM1	4.2367	.60026	169
CRM2	4.0769	.60749	169
CRM3	3.9763	.69823	169
CRM4	3.6805	.73495	169
CRM5	4.0414	.69312	169

## Performance of Commercial Bank

### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.784	.794	5

### Item Statistics

	Mean	Std. Deviation	N
POCB1	3.9586	.56013	169
POCB2	4.1420	.53781	169
POCB3	3.9882	.57723	169
POCB4	4.1953	.41228	169
POCB5	3.9704	.57140	169

## Analysis on the Effect of Determinants of Credit Risk Management on Credit Risk Management at A Bank

### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.572 <sup>a</sup>	.327	.315	.28812	.327	26.723	3	165	.000	1.887

a. Predictors: (Constant), MRAM, CAMM, ERM

b. Dependent Variable: CRMM

**ANOVA<sup>a</sup>**

<b>Model</b>		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	6.655	3	2.218	26.723	.000 <sup>b</sup>
	Residual	13.697	165	.083		
	Total	20.352	168			

a. Dependent Variable: CRMM

b. Predictors: (Constant), MRAM, CAMM, ERM

**Coefficients<sup>a</sup>**

<b>Model</b>		<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>t</b>	<b>Sig.</b>	<b>95.0% Confidence Interval for B</b>		<b>Correlations</b>			<b>Collinearity Statistics</b>	
		<b>B</b>	<b>Std. Error</b>	<b>Beta</b>			<b>Lower Bound</b>	<b>Upper Bound</b>	<b>Zero-order</b>	<b>Partial</b>	<b>Part</b>	<b>Tolerance</b>	<b>VIF</b>
1	(Constant)	2.436	.315		7.733	.000	1.814	3.058					
	ERM	.368	.054	.473	6.762	.000	.261	.476	.541	.466	.432	.834	1.199
	CAMM	.104	.048	.139	2.167	.032	.199	.009	.170	.166	.138	.989	1.011
	MRAM	.117	.056	.145	2.077	.039	.006	.229	.328	.160	.133	.838	1.194

a. Dependent Variable: CRMM

## Analysis on the Effect of Credit Risk Management on Performance of A Bank

### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.791 <sup>a</sup>	.626	.623	.24071	.626	279.016	1	167	.000	1.448

a. Predictors: (Constant), CRMM

b. Dependent Variable: POCBM

### ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.166	1	16.166	279.016	.000 <sup>b</sup>
	Residual	9.676	167	.058		
	Total	25.842	168			

a. Dependent Variable: POCBM

b. Predictors: (Constant), CRMM

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero - order	Partial	Part	Tolerance	VIF
1	(Constant)	.538	.211		2.546	.012	.121	.954					
	CRM	.891	.053	.791	16.704	.000	.786	.997	.791	.791	.791	1.000	1.000

a. Dependent Variable: POCBM