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CHALLENGES OF SHIFTING TOWARDS RISK-BASED FROM ASSET-BASED LENDING PRACTICE IN MYANMAR PRIVATE BANKS

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ABSTRACT

The objectives of this study to identify the risk-based lending practices of banks in Myanmar and to analyze the challenges of shifting towards risk-based from asset-based lending practice of private banks in Myanmar. This study uses descriptive analysis meth with both primary and secondary data. The primary data are collected by structured questionnaires which have been asked to the 60 staffs (15%) from out of 386 staffs who are working in credit departments of six major private banks. The analysis of the study found that issues and challenges are existed in implementing risk-based lending practice in Myanmar private banks. Based on the overall mean scores, respondent have rated the challenges in the ranking of the medium and high level of agreement. The analysis indicates that the employees are facing the high challenges in credibility of financial information and reliability of rating models and medium challenges in predicting cash flow, process efficiency and infrastructure, difficulty in obtaining audited reports, problem loan management, sustainability of business model. Some of challenges in bank's control can be resolved within the bank internally. However, some challenges beyond the bank's control cannot be resolved in short term. Some of the challenges are national level should be brought to related regulatory authority to promote the risk-based lending practice in Myanmar. The further studies are also advisable to do by using different parameters to explore the challenges in risk-based lending because RBL implementation period was very short, immature and possibility of changes in regulations, banking landscape, infrastructure and technology in future.

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LISTS OF ABBREVIATIONS

SMEs	Small and Medium Enterprises
MSMEs	Micro Small and Medium Enterprises
KBZ	Kanbawza Bank
AYA	Ayeyarwady Bank
CB	Co-Operative Bank
MAB	Myanmar Apex Bank
MCB	Myanmar Citizens Bank
SMIDB	Small and Medium Industrial Development Bank
CHID	Construction and Housing Development Bank
MTB	Myanmar Tourism Bank
MOB	Myanmar Oriental Bank
MEB	Myanmar Economic Bank
CGI	Credit Guarantee Insurance
ABL	Asset Based Lending
RBL	Risk Based Lending
ALM	Asset Liability Management
CBM	Central Bank of Myanmar
GIZ	Gesellschaft für Internationale Zusammenarbeit
FRD	Financial Regulatory Department
MBA	Myanmar Banks Association
YUE	Yangon University of Economics
UMFCCI	Union of Myanmar Federation of Chambers of Commerce and Industry

CHAPTER I

Introduction

Lending and credit are key determinants to developing economies by mobilising savings to borrowers for capital formation in form of loans. Credit is fundamentally the trust which helps people to reach their financial, personal, professional goals. Economic growth of a country is highly supported by the credit system. Credit facilitates the large scale of production of goods and advancement of technological research and help entrepreneurs utilizes their abilities in running successful businesses. The impact of credit growth improves economic environment of a particular country and encourage the spending of households and investments. Availability of credit results in emerging startup business enterprises which came into existence by using their abilities and skills effectively.

Commercial banks bridge savings of the individuals with the accumulation of capital, borrowed them to those who need and to the businesses as well. Lending practices of the commercial banks are mostly influenced by monetary policy, laws, directives and regulations enacted by financial regulatory authorities such as central banks. In many countries, financial regulators are performing active involvement in promoting the role of MSMEs by best-achieved financing policy measures because the governments realized that MSMEs are the backbone of the global economy and one of the most important growth engines to develop a country. Although the most of the commercial bank are offering the extensive range of loan products to the customers nowadays, difficulty of accessing finance is still the major issues faced by firms including MSMEs. Unsecured lending or uncollateralized loan has been mostly hampered by fear of risk by financing institutions and unlocking those barriers is critical towards sustainable financing of the banking sector.

In traditional bank lending, the assets considered essential and the loan is secured by the collaterals of the borrower. As the loan is secured by collaterals, asset-based lending is considered less risky compared to unsecured lending. Asset-based lending provides effortless approach to financing enterprise operations for the banks but there are many constraints for the firms to receive the finance due to collateral requirements by lenders. In risk-based lending, current business operations and future potential growth are evaluated and its future cash flow is projected. Risk-based lending is more flexible for the borrowers due to its uncollateralized nature but complex and requires sound credit analyzing skills for the banks. Under the risk-based lending system, banks need to do the proper risk assessment to determine an acceptable level of risk, known as “risk appetite” as well as other factors. Risk-based lending is generally suited to SMEs that maintain good financial performance and efficiency but lack of enough hard assets to offer as collateral to qualify for loans. Since conventional collateral-based lending practice poses many barriers to firms especially to SMEs, transforming lending methodology to risk-based lending is an important step towards developing economy.

1.1 Rationale of the study

Bank lending is the most common external source of finance for many businesses and SMEs in Myanmar where businesses are heavily relying on the traditional debt to fulfill their capital requirement and investment needs. However, many challenges still remain for those enterprises seeking to access the finance for their start-up and future growth in Myanmar.

One of the major obstacles is the difficulty in acquiring land or capital assets in order to fulfil the collateral requirement by lenders (banks). Therefore, relaxing the collateral-based system in applying loan is necessary to facilitate firms qualify for loans in Myanmar. Existence of capital gap is also one of the major barriers faced by MSMEs when undertaking important activities in competitive business environment because credit constraints apply in accessing loan which is hampered by strict collateral-based lending practice in Myanmar.

Series of reforms for financial sector in recent years in Myanmar resulted in further liberalization of the banking sector such as CBM’s directive 7/2017 which approved the relaxation of collateral requirement for granting loans. It was the significant shift in government’s lending policy for Myanmar private banks. Opening of Myanmar Credit Bureau which was granted a license on May 17 of 2018 was also major improvement for shifting towards risk-based lending, which enable the lenders to access the credit histories and credit worthiness of companies as well as individuals. Apart from that, banks can make better decisions to grant the loans in the real time.

As seen in many emerging markets, changing the landscape in financial sector puts great demand on more bank loans and banking market also become more competitive. That is why some of the private banks in Myanmar have already been training the staffs in preparing for risk-based lending system since two years ago to adapt the CBM's policy and directives. In terms of the risk-based or cash-flow based lending system, banks can take a more comprehensive approach in judging the weaknesses, strengths, viability, credit limit and most importantly, the repayment capacity of each business. If banks become more familiar with risk-based lending practice, financial inclusion would be benefited for MSMEs and more long-term loans could be granted to support effectively the country's MSMEs in Myanmar.

1.2 Objectives of the study

The objectives of the study are as follows.

- To identify the risk-based lending practices of banks in Myanmar
- To analyze the challenges of shifting towards risk-based from asset-based lending practice of private banks in Myanmar

1.3 Scope and Methods of Study

This study focuses on challenges of risk-based lending practices of private banks in Myanmar. The risk-based lending implementation from 2017 to 2019 is presented in this study. Random numbers of 6 banks are selected out of 27 private banks in Myanmar. Around 386 staffs who are working in credit departments of six major private banks. 60 staffs from credit department (15%) out of 386 are targeted randomly for sampling.

This study uses descriptive analysis method. These are both primary and secondary data, where the primary data are collected and structured questionnaires are used. Secondary data are obtained from book references, magazines, journals, scholar articles, internet websites, company records, and reports from relevant institutions.

1.4 Organization of the Study

This study consists of five chapters. Chapter (1) includes the introduction that provides the details of the study background and rationale, objectives and scope and method of this study. Chapter (2) discusses the theoretical background of risk-based lending system Chapter (3) is the overview of Myanmar Private Banks and Chapter (4) analysis on the challenges of shifting towards risk-based lending in Myanmar Chapter (5) describes findings, recommendations, suggestions and need for further study.

CHAPTER II

THEORETICAL BACKGROUND OF RISK-BASED LENDING

This chapter is the literature review over risk-based lending which is practiced as modern lending methodology in banking sectors. It consists of the sub-chapters-the role of credit in financial system, essentials of credit risk analysis, traditional collateral-based lending and its advantages and disadvantage, risk-based lending and its advantages and disadvantages, most common challenges in risk-based lending.

2.1 Role of Credit in Financial System

Credit can be generally described as an agreement between a lender and a borrower who promises to repay the lender at a later date, generally with interest. Credit can come in several shapes and different types. Out of various types of credit, financial credit is the most well-known form of credit especially in banking sector. Idle economic resources can be effectively transformed through credit which can be returned to the lender after having achieved the objective.

Financial intermediaries play important role in making the credit available. Financial institutions such as banks which facilitate the loan proceeds given to one borrower from another could increase the credit availability in the economy. Banks provide necessary finance for planned development. In developed and developing countries both, credit is the fundamental of finance upon which the economic structure is strengthening. Agriculture and industrial credit used to be encouraged in order to achieve high rate of economic growth over a long period. Credit provides financial ability to use advanced technology in the production. So the quality of production and product may increase. Bank lending is very important to the economy, for it makes possible the financing of the agricultural, industrial and commercial activities of the country.

Proper use of credit results in economic growth of borrowers, which in turn leads to the overall economic well-being of the society and economy as a whole. Credit encourages both household consumption and business investment. Government's policies on lending are also important tools to strengthen industrial development and business investments, thereby creating employment opportunities and improving living the standard of the people. Easy availability of credit promotes the entrepreneurial and self-employment venture in the country. Thus, credit is financial power which plays a significant role in driving economy.

2.2 Principles of Sound Lending

Lending is the banking industry's most important business and must also be profitable. The credit risk, on the other hand, is always present in loans. Therefore, credit specialists in banks can handle their loans responsibly and profitably. Banks should follow certain basic principles at the time of lending. It guarantees that banks are profitable and safe from future non-performing loans. Some of the basic principles of safe lending are as follows.

Safety: The purpose of the loan is to ensure the security of the loans. The lending agreement guarantees that the borrower is able to repay the debt together with interest. Therefore, the creditor is not only able to repay but also willing to pay. To order to ensure financial stability, it is very important to consider the following factors:

Table (2.1): Factors to be considered for sound lending

5Cs	5Ps	5Ms	5Rs
Character	Person	Man	Reliability
Capacity	Purpose	Management	Responsibility
Capital	Product	Money	Resources
Condition	Place	Materials	Respectability
Collateral	Profit	Market	Returns

Source: JBSC, Dhaka

Therefore, banker should take utmost care in ensuring that the enterprise or business to which a loan in to be granted is a sound one and the borrower is capable to repay it.

Profitability: Commercial banks are institutions that receive income. The ultimate goal of the loan is to earn. The Bank must earn enough income to pay interest to depositors, meet institution fees and staff salaries, receive future income, and allocate shareholder dividends. The sound lending principle does not sacrifice security or liquidity for the sake of increased profitability. It is therefore critical that whatever a company the bank indulge in, the company is profitably enough not only to meet its expenses, but to produce surplus funds. or margin.

Liquidity: Liquidity is the ability of a bank to meet its customers ' claims. The term loan liquidity refers to the swift realization of the borrowers ' loans. The money should be repaid to the bank according to the timeline of repayment. The timetable drawn up by the banker would conform with the condition that the banker has liquidity at any point in time to satisfy the withdrawals of the depositors. Various deposits have various maturities and some of them are also payable on request. Banks are primarily short-term traders and therefore loan money only for the short term. The lender will ensure that the borrower will repay the loan on request or shortly.

Purpose: The banker will understand the reason for which the loan is being sought before issuing loans. Loan protection and liquidity depend on the intent of the loan. If the loan is given for productive purposes, the borrower can make a great deal of income and can repay the loan. Loans for unproductive reasons and for every reason should not be given. The funds lent should be used to the best possible extent.

Security: The loan protection may consist of a wide variety of items. There may even be situations in which there is no defense. The banker must know that in case of need, it is just a shield. The health and its adequacy alone should not only be taken into account when determining the feasibility of a loan application. The protection will, however, be sufficient and marketable, easy to handle and free of pressures, if accepted. It is the banker's responsibility to examine the quality of the protection and determine whether the loan issued is appropriate.

Diversification: Every loan has a risk of its own. The risk factor in respect of loans cannot be completely removed, it can be that only. It is therefore easier to forward the risk of different purposes and parts. By diversifying the loans, the risks of lending can be reduced. The lender should not give a large part of the loan to a particular person, business or industry during the grant of loans. Through lending funds to different industries, firms, individuals or sectors, a bank can save itself, by growth in others, from the downturn in some industries. Moreover, even if a single company or business does not repay the loan, the bank will not incur a heavy loss. Banks must lend to a wide range of industries and lenders to diversify risk.

Suitability: In the economic health of the nation, bankers will focus lending activity on the desired intent. Gambling finance is not a part of banking. Controlling inflation and rising people's living conditions should be taken into consideration.

Government policies: Banks are also required to meet certain social responsibilities in almost every region. Banks also have other social responsibilities to society. Government policies and national interests place on commercial banks some social responsibilities. In addition to health, liquidity and competitiveness, the banks must take into account the economic and social interests of the government. When the loan strategy is formulated, banks are driven by public policies for the disbursement of credit. The banks ' lending policies must be changed from time to time to meet the needs of the economy. National interest and strategies therefore affect banks ' lending decisions. In addition, all principles of sound lending must be taken into consideration when valuing a loan application and making decisions on loans.

2.3 Definition of Credit Risk

Credit threats are the potential to lose money because of incapacity, non-compliance or no time to pay the balance lent from a credit case with a bank creditor, or so called a counterparty, in keeping with the agreed terms. Three basic concepts are related to the inability to pay. Firstly, insolvency describing the financial situation of a borrower whose liabilities exceed his assets. Nevertheless, insolvency is commonly used as a synonym for fraud, but these are different cases. Additionally, defaults are failure to comply with a contractual obligation, for example by failure to pay. Typically, but not always, the default is due to insolvency. Thirdly, bankruptcy happens when a judge resorts to a company's insurance files for either restructuring of the obligor or for its breakup if it cannot be restructured. In most situations, credit risk risks entail the failure of the obligor to fulfill his financial obligation. Credit risk is the greatest risk facing most banks and is the product of the probability that bank lending or other types of credit instruments may not be repaid in whole or in part. Credit risk is often synonymous with default risk as well. It concerns possible bad loans or financial defaults directly. The fear of borrowing is not limited to banks and their lenders. Credit risk is exposed to companies themselves when trading with customers and suppliers. Almost every corporation in industry is subject to credit risks primarily because they do not allow direct payments for products or services.

2.4 Essentials of Credit Risk Analysis

Credit risk analysis includes the study from a lender's viewpoint, including corporate payables, bonds and government securities, of a current and prospective demand on another economic entity in the form of debt. In the early days when the credit appraisal approach based on the financial statement rose during common, the main emphasis was on the company's balance sheet. The financial strength or vulnerability as shown by the balance sheet showed a company's ability to deal with bad times. Sufficiency and quality of the assets and the contribution of the owner to the company can be useful indicators of sound financial base. Over the years, the focus has been put on the profit and loss account, as the survival of profits has become significant.

For many years, the study of credit risk has been used and can be seen as one of the traditional financial activities known. Over the years, several strategies have been developed for handling credit risk. Of example, refusing to make a loan is the best way to avoid credit risk, but it excludes the opportunity to benefit from the bank. Managing credit risk is therefore mainly important by recognizing all conditions that can lead to a financial loss due to a counterpart default. Many different kinds of complicated financial transactions can lead to credit risk.

Credit risk has historically been actively managed in bank loans and export receivables. Risk-based credit risk analysis is the most evident field. The act of lending was followed by a check of the borrower's ability to repay the money. Credit risk management guarantees both financial and non-financial fitness. The most famous credit review involved five key factors, weighing them subjectively and making a credit judgment. The aim of credit risk analysis is to find a solution to a problem of extending the new loan or removing the current set of credit facilities available to a borrower. The following considerations (called the 5Cs of credit) are considered either implicitly or explicitly in all such questions:

Character: A measure of the company's reputation, its readiness to repay, and its history of repayment. It shows the borrower's integrity and honesty in paying his dues on time. The credit history has shown many occasions in which the borrower was able to repay but not prepared. Through researching ownership and management as well as his past record, an observer can take an informed view of the character of the creditor.

Capital: The equity balance of investors and their debt ratio (leverage). These are considered good predictors of risk of bankruptcy. High leverage means that recession is more likely. A wise lender should ensure that the creditor is properly involved in the business. Lenders have to ensure that the entrepreneur's major interest is at risk should the business fail.

Capacity: The borrower must study its ability to meet its debt service obligations. The review of financial statements, i.e. the financial analysis, including the definition of financial factors that show the payable ability of the creditor, will do this in the case of business loans. Since enterprises are affected by the broader economy, it is also important to analyze economic conditions in order to determine capacities.

Collateral: Collateral means the collateral pledged to protect the loan by the creditor. In the event of default, the lender has rights on the borrower's equity. The higher the priority and the higher the market value of the underlying collateral, the lower the risk of the loan's exposure.

Cycle (or Economic) **Conditions**: The status of the business cycle; an important part in determining exposure to credit risk, particularly for cycle-dependent industry. Similarly, sectors that are subject to competitive international markets are often cycle-sensitive. Conditions include the terms and conditions included in the deal on loans or credit facilities. The lender shall ensure that the terms of the loan agreement are legally enforceable.

The 5Cs Model is the traditional model for credit review. Current techniques of credit risk analysis were improved by the 5Cs paradigm which made the approach to credit risk analysis more detailed and systematic. Knowledge of credit analysis has been developed, requiring a thorough study of different factors affecting credit risk. Some of these risks cover global and external, manufacturing and domestic risks, financial and derivative risks.

The following areas are also typically assessed in modern credit analysis.

The Business: Products and services, challenges, risks, opportunities, competitive advantage, key success factors, life cycles, market share.

The Industry: Conditions, trends, markets, competition, ease of entry, regulation, cycles, technological change, buyer / supplier concentrations

The Business Strategy: Growth plans, resources, impediments to growth

Management Assessment: Integrity, competence, depth, past performance, ability to implement strategy, succession plans, quality and independence of directors

Financial Analysis: Historical and projected financial performance

The modern credit analysis approach enables the analyst to see the whole picture from external industry and corporate level and facilitates effective judgment on the level of credit risk involved in a given situation.

2.5 Asset-Based Lending Practice

Asset-based lending refers to a debt that is backed as collateral for a loan by properties such as land, inventory, facilities or payment receivables. In other terms, the loan issued by the lender is collateralized with the borrower's savings (or collateral). Eligibility for loans is measured and protected primarily against collateral. In contrast with unsecured loans (the debt which is not backed by income or assets), asset-based lending is perceived to be less costly and therefore results in a lower rate of interest paid. Moreover, the more liquid the asset is, the less risky it is, and the lower the interest rate requested.

Asset-based loans are typically used by companies that need cash flow immediately to fulfill their short-term needs. That could be because corporations have to cover running costs, such as making wages affordable because they grow rapidly and need capital to expand. Sometimes an investment can even be funded. The biggest risk in collateral-based loans is that if they cannot afford repayments, the corporation will lose the loan. In the worst case, if the product they used is critical for their company–like the land they do business, this could lead to their inability to function.

2.5.1 Advantages of Asset-Based Lending

For borrower: asset-based lending is easier and faster than unsecured lending and lending. Such loans usually have few commitments, and asset-based loans typically have a lower interest rate than other financing options. For loans: Asset loans are less costly as they are secured for assets or equity. If the debt fails on the creditor, the lender may purchase and liquidate the assets to secure the loan and repay the outstanding amount.

2.5.2 Disadvantages of Asset-Based Lending

For borrower: In case of default, the worst outcome of any collateral-based debt loses money. The amount of funding you earn from an asset-based loan depends on how the equity is priced. If the asset interest increases over time, the debt cap will not increase. As a consequence, lenders have a much smaller product than is actually working. For lenders: One of the main drawbacks of asset-based lending is that if repayments fail, the lender can seize the assets. Another disadvantage for banks is the high interest rate on the assets. Because it requires a lot of supervision and auditing, it also includes other extra costs, such as upfront compliance costs and fees for assessors.

2.6 Concept of Risk-Based Lending

Risk-based lending is the pricing method of a lender driven on the borrower's risk. The higher risk leads to higher interest rates with most loans and lower risk of lower interest rates. Risk-based lending in many banks is also known as cash flow-based lending. Since the credit is issued on the basis of a borrower's projected future cash flows, equity is not the primary consideration. The borrowing is financed by the past and future cash flows of the borrower, meaning that the corporation borrows the money from the expected income (future predicted cash flows), which is anticipated to be created in the near future. In this form of lending, credit ratings are also considered important criteria.

Risk-based lending is a mechanism by which a lender can satisfy its lender's lending needs more efficiently. It requires the development of a tiered price structure that allocates loan rates depending on the credit risk of a person. To order to maintain a consistent lending process, banks must define risk factors for each loan. Two groups of lenders generally benefit most from risk-based lending.

Creditors trying to repair loans from their past financial mismanagement (i.e., seriously outdated credit, pre-charge-offs, defaults, etc.) and lenders trying to establish credit (i.e., first time borrowers, low credit histories). While the rates charged by lenders with poorer than perfect credit ratings are greater than those paid by borrowers with strong credit history, these borrowers may earn borrowings without accounting for the unfair costs levied by many alternative financial companies.

Risk-based loans can be competitive for borrowers as long as bank rates are adequate to provide for the risk of loan default and overhead costs involved with performing, processing, recovery and collection. Risk-based lending incentives also provide lenders with a strong credit background by lowering interest rates. Borrowers are compensated by a well-planned risk loan scheme on the basis of how they handle their credit history. As the credit history of the borrower improves, risk-based lending should recognize and reward the financial improvement of the borrower. To function correctly, risk-based loans require: specialized expertise sound planning and reliable monitoring and control systems

2.6.1 Difference between ABL and RBL

The primary difference between these two forms of debt systems is that profit is secondary in asset-based loans. The amount of the debt is normally based on the value of the property or asset given as collateral and not the company's potential for cash production. In fact, the duration of the loan and the form of interest are not based on the cash flows of the applicant. These are usually short-term loans where the loan amount is dependent on the value of the object.

For risk-or cash-flow-based loans, the volume of the debt is based on the company's real revenue production and its servicing capacity. In fact, the repayment schedule is based on the timing of the capital inflows of the company. In some situations, equity can be used for this type of loan but this is not the primary consideration for the loan. Cash flow-based lending is best suited for short moving debt lending because the terms and timeline for repayment are largely based on the actual cash output of the business and thus the probability of loss is minimized because the assets are diversified.

2.6.1 Advantages of Risk-Based Lending

For borrowers: one of the many advantages of risk-based or cash-flow loans is that a borrower can get funding much quicker, as collateral assessments are not necessary. The repayment period that it provides is another feature of the cash flow loans. Cash flow-based loans are generally designed according to the borrower's needs with interest terms typically between five to seven years. Since risk-based loans vary from asset-based loans, lenders don't typically have to provide collateral for access to the bank's credit. It allows lenders to pay according to their needs and there is no conflict for their money. For lenders: Risk-based lending strongly facilitates financial inclusion that benefits from credit expansion to more customers. Instead of refusing loan applications who posed a risk of default, the borrowers could accept it and charge a relatively higher loan price to cover the additional risk. Since risk-based financing involves skills, data analytics and mathematical modeling are strengthened. Credit markets well-developed also provide greater mobility for borrowers. The economic growth benefit of credit markets that make credit available to large segments of the population and the extension of access to consumer credit through risk-based pricing.

2.6.3 Disadvantages of Risk-Based Lending

For borrowers: when the banks approve or reject loan applications, they can have stringent rules and conditions on risk-based lending. Not all businesses meet the criteria set by the banks. Borrowers may not get all of the money they have applied for since the loan decision is based on the cash flow expected and associated risks. Although collateral does not need to be protected in risk-based lending activity, further paperwork work may be needed before or during loan processing by the lender. For lenders: Risk based lending needs more individuals to use resources that can offset banks ' recruiting costs. Therefore, because RBL requires advanced skills, workers must have a well-equipped training program. For conventional credit risk analysis, well-designed computer systems are primarily used in certain banks and require extra hardware and software costs.

2.7 Literature Review on Risk-Based Lending Challenges

Credit risk monitoring is the main component of risk-based lending and one of the most daunting banking activities. Several firms, especially banks and financial institutions, collapsed due to poor credit risk management. The problems stem from inconsistent financial data, the complexity of risk models, duration of time and broader issues, such as sales-to-credit stress. There are also a significant impact on the dynamic banking climate, regulatory requirements, different areas and roles in the economic and credit cycles. There are seven main credit risk management issues, including those emerging from the wider market system from Moody's research viewpoint.

Financial information: level of detail, reliability, timeliness

One common complaint, particularly for the credit analysts, is that the financial information does not provide the drivers of the firm with sufficient detail. Revenue division by product, region or business line, results relative to target, lack of a comment on cash flow. Borrowers also complain that the information they create is necessary for them to successfully manage their company and do not have the capital to obtain accurate financial information. The financial banks do not have a knowledge of the product and need more detailed detail. If there is a good relationship and the proposal is fair, lenders are usually open to changing the details they provide. In addition, technological progress can address certain of these challenges, as many providers can link the financial accounting software of a borrower directly to the bank records. The automatic delivery of financial data from the lender to the creditor will help solve challenges with money, accuracy and timeliness.

Predicting cash flow: Difficulty predicting future cash flow

It must be derived either from historical or forecast revenue and balance sheet statements before cash flow can be predicted. After the data has been collected, a financial analysis kit is not an unduly difficult task. Nonetheless, it can only be done with appropriate information from a creditor to consider the anticipated trend in the borrower business and insure that the features of any new capital structure are integrated in the projected cash flow model.

Rating Models: Accuracy or relevancy of rating models

Models are just as strong as the consistency and value of the data they power. Thus, a validated and credible index–accurate market information based on historical business default data–is important. Therefore, a global and comprehensive database of historical financial statements and default rates is needed. Largest source of financial information and defaults for private companies use models based on ratios which have proven highly predictive of default and which thus advise of credit loss in an effective way.

Process efficiency and infrastructure: Efficiency of the operation and technology of the network. The main problem here is how long it takes for an applicant to complete a loan application and disburse funds, usually known as "time to cash.", market environment , quality of decision makers and system infrastructure. This inefficiency will result in slower responses where the mechanism is too manual and there are too many processes and where data is duplicated. Whilst existing structures and hardened data siloes will find it difficult to streamline lending practices, modern outsourced or cloud solutions provide an attractive alternative because they do not require new equipment or extra IT resources and are upgraded and backed up automatically.

Data, reporting, and audit: This relies on several factors to be able to obtain reliable data to understand the key performance metrics and audit criteria. Next, emphasis on which data is the most important. First, a data structure or program that user-friendly gathers the right data is important. Finally, strict discipline and well-defined processes are necessary for the accuracy of data collection and retention.

Problem loan management: Lenders with successful mechanisms to identify troubled accounts early are most likely to minimize losses. Bankers should: build good borrowers relations. Have triggers for early warning such as agreements in place. Have a team of experts–primarily on a management basis, but if necessary, to partially or fully handle troubled accounts.

Business model sustainability: Alignment between the business market plan and sectors that are adequately creditable is necessary if damages are to be mitigated when a particular sector tends to underperform. As well as being aligned with strong sectors, it goes without saying that the general business strategy is viable in an increasingly competitive marketplace. Nonetheless, there are two additional factors: poor financial performance will result in pressure to take greater risks and go beyond those risk parameters. Most borrowers do not fully understand the viability of the transactions they enter into. To answer the first issue, a strong risk culture with low tolerances beyond acceptable risk boundaries is important. In order to tackle the second point, robust models are needed that tap into correct offer price software.

In addition to these seven major challenges, risk-based lending can pose more challenges and problems according to various banking environments. Processes that improve the study of quantitative and qualitative evidence, the consistency of decision making and ties between borrowers and lenders resolve these challenges.

CHAPTER III

OVERVIEW OF PRIVATE BANKS IN MYANMAR

3.1 Banking Landscape in Myanmar

The government of Myanmar's reform efforts and the opening up of the economy have contributed to economic growth and high expectations for low-income households since 2010. Despite recent development, there remain many obstacles as the current government tries to balance a number of goals. The banking sector is the priority of the new Government's economic reforms, in view of the role played by a well-functioning financial sector in helping the private sector to expand.

Based on strong bank demand and the political and economic liberalization, Myanmar banks ' support infrastructure is expanding at a rapid pace. It includes institutions such as the Myanmar Banks Association (MBA), the Myanmar Payment Union and the new Myanmar Credit Bureau Limited and a wide array of bank education and training providers such as the Yangon University of Economics (YUE) and the Myanmar Banking Institute. The rapid growth of the banking sector is a big factor for financial education and banking preparation.

In the constitutional and regulatory context, the government has adopted many new legislation, including 2012 Foreign Exchange Management Act, 2013 Myanmar Central Bank Law and 2016 Law on Financial Institutions. Such regulations ended Myanmar's dual-exchange system, established independence of the central bank and laid down strict prudential principles for the banking sector. At the same time, the government also took tentative steps to encourage international investment in the banking sector.

Myanmar's banking sector currently comprises four state-owned banks, 27 domestic private banks and 13 branches of foreign banks. There are also 49 foreign banks ' representative offices listed on the CBM website. However, there are still challenges. It involves building public trust to promote public-private investment and work in financial services. Good banking governance and a robust culture of risk management can help build this trust in order to increase the banking and financial sector.

3.2 Overview of Private Banks in Myanmar

Twenty eight domestic banks currently operate in Myanmar. The figure includes four state-owned banks, three municipal banks, 10 semi-private banks that trade privately but are, in part, governmental institutions owned or closely linked, and 14 private banks. The so-called "Big Three" dominates the market among the private banks. Combined, Kanbawza Bank (KBZ), Ayeyarwady Bank (AYA) and Co-operative Bank (CB) have ownership of about two thirds of all loans, two thirds of all deposits and over 50% of all bank branches across the country13. Myanmar banks have a long history of relying heavily on land and buildings for loans. Customers generally received only credit banks as immovable properties, such as land and buildings. For many years, CBM regulations allowed banks in Myanmar to lend only with collateral. The only appropriate collateral after the 2003 banking crisis was immovable properties, but the list of collateral was gradually expanded by 2011. The following are authorized sources of collateral: land and buildings, gold, gems and precious metals, securities, government treasury bonds, cash deposits, shares, bank certifications and loan guarantees. Nevertheless, the land is the most widely accepted source of collateral. Historically, private banks in Myanmar were hesitant to lend the borrower without collateral. If consumers apply for a bank loan in Myanmar, equity is deemed to be main assets in the credit evaluation process. Standard collateral-based lending strategies are still the main tool and financing channel for private banks in Myanmar.

Based on the estimated cash flow of the borrower, CBM allowed banks in November 2017 to provide unsecured and partially secure credit facilities, provided the banks set up proper credit risk management systems. As a consequence, some of the more advanced banks are now lending in a small way on the basis of criteria like cash flow and receivables. Many experienced borrowers are clearly making strides in developing an infrastructure for internal credit and risk assessment for unsecured loans.

3.3 Regulations Liberalized for Risk-Based Lending

In a November 2017 directive No. 7/2017 issued by CBM, banks are encouraged to develop new loan products which will evaluate the creditworthiness of clients through cash flows and the analysis of their business cycles. Banks are required to apply CBM no opposition to the proposed loan products and the related credit risk review. Nevertheless, CBM procedures are not defined for new product approvals and the approval process is not yet transparent. In fact, banks face limits on developing new loan products based on borrower cash flows, as the average effective lending rate is 13 percent lower than the interest rate expected on credit risks associated with most companies. Nevertheless, local banks are paying regular term loans at up to 13% of the annual rate and other refinancing and discounted loans at about 8.5%.As of March 2018, a drafting committee was forming the Financial Regulatory Department (FRD) of Finance Ministers ' Corporation law to help develop a legal framework for the issuance of credit insurance to SMEs.

3.3 Limitations of Collateral-Based Lending

Under the collateral scheme, banks approved land and landed properties as collateral and loan term for a year. After evaluating the market value of the collateral, the bank estimates the collateral's forced-sale value. To order to keep borrowers on the safe side, banks usually give up to 50 percent of the collateral's coerced selling interest. This system has been used as the standard banking procedure since 2008, when the central bank began enforcing various restrictions on the banking sector, in fear of a recurrence of the 2003 banking crisis in Myanmar. The most severe limitations on the issuance of credit is imposed. These include stringent collateral-based loans, regular lending, large volumes of overdraft loans and a lack of proper control of credit risks.

Myanmar private banks are currently accepting all forms of short-term deposits, including fixed deposits. Since 2008 the banks have not been allowed to lend such short-term deposits to prevent overlap between short-and long-term deposit maturities and long-term loans, and local SMEs, seeking medium-to long-term loans, have failed to consider transferring them. This prompted lenders to spend money on business development instead of purchasing properties in the expectation of using such assets as collateral for future loans. As a result, few could repay their loans over a period of one year. The repayment of the loan was therefore rolling from year to year. The banks permitted this practice as long as loan interest was regularly serviced. Since the lending is dependent on collateral, the lending ability of the banks and obstacles to lenders in order to meet the collateral conditions for applicants for loans are limited.

3.5 Risk-Based Lending Practices in Myanmar Private Banks

The CBM Directive 7/2017 of 24 November 2017 marks a substantial breakthrough from the old banking practice of the collateral-based lending system to the risk-based system. Through issuing the directive, the CBM allowed banks to restructure their unpaid excesses into term loans with a maximum maturity of three years, based on the expected cash flow and related lenders ' risks. The repayment terms are adjustable so that lenders can meet their loan commitments in compliance with the prior agreement with banks on a suitable basis. This move to make investing and financing for banks and firms more flexible follows a series of regulatory easing in Myanmar's banking sector. In so doing, CBM encourages local private banks to change their lending practices towards risk-based lending schemes to support the financial system of the country.

In addition, CBM encouraged local banks to create new products with payment conditions that take into account the borrower's sales cycle and cash flows, move from leverage to risk-based lending practices. The new system does not mean that collateral requirements are relaxed when loans are applied for. Banks may still use their risk assessment processes to collateralize land, buildings and other immovable properties. However, the ownership of collateral is not primarily a matter of eligibility for loans.

Several borrowers, among them CB Bank and KBZ, have opened SME loan centers for the SME market. Yoma Bank has long been focussed on lending to small and medium-sized businesses, and has been funded by GIZ on a pilot programme, which constructs a credit risk framework with SME loans in mind. The bank announced new SME value chain funding loan services in early 2018. KBZ has a related GIZ SME pilot programme. Around 2016, the SMID, CB and AYA banks began offering non-collateralized education loans in local private academic institutions to graduate level students. Education loans can cover up to 90% of tuition fees at an annual rate of 13%. Many banks currently offer home loans to retail customers as well, such as CHDB, KBZ, AYA, MCB, and YOMA. Loans shall be chargeable at a net interest rate of 13 percent, and the loan period shall be for apartments up to 15 years and for land, buildings and condominiums up to 25 years. Several banks, such as AYA and CB, offer personal car loans under their rental transactions. Due to regulatory lending liberalization, banks are willing to sell their customers more flexible loan products, which do not allow lenders to pay equity as minimum requirements. Risk-based lending is specifically intended to grow small and medium-sized enterprises, because most SMEs can't afford collateral depositing. (GIZ, 2018) Nevertheless, the risk management approach will be used to assess all safe and unsecured loans, particularly though borrowers accept borrower collateral. Some borrowers have only completed a risk assessment of inefficient loans, and some banks have struggled at all. However, for unsecured loans, the assessment of credit risk is a must to protect the bank.

The sources state that the Myanmar Oriental Bank, the Ayeyarwady Bank (AYA Bank), the Co-Operating Bank (CB Bank), the Kanbawza Bank (KBZ Bank) and the Small and Medium Industrial Development Bank (SMIDB Bank) are providing unbundled loans to small-and medium-sized businesses lenders under the Credit Garantee Insurance system (CGI). Myanmar Citizen Banks and Myanmar Tourism Bank (MTB) newly formed also provide uncollateralized loans to small and medium enterprises. Having said that consumers will also have the incentives for the lender or the borrower's business. (Myanmar) SMEs must submit a business plan and a statement of revenue to the banks for the last two years to receive loans without collateral. Nonetheless, SMEs are poor to fulfill these requirements. Therefore, if SMEs want access without collateral to loans, the Central Bank must change its policies, Vice-President of the Union of the Burmese Federation of Chambers of Commerce and Industry (UMFCCI). (HTWE, 2017)

Financial technology should first be strengthened to establish the level of trust between lenders and borrowers, and banks should familiarize themselves with asset liability management (ALM), a useful tool for handling current and future balance sheet-related liabilities, to facilitate a risk-based lending approach. Banks would be able to maintain collateral risk in acceptable parameters by incorporating a robust ALM program. You could also track and control their credit risk to ensure that potential risks are handled. (THEIN, 2018).

CHAPTER IV

ANALYSIS ON THE CHALENGES OF SHIFTING TOWARDS RISK-BASED FROM ASSET-BASED LENDING PRACTICE IN MYANMAR PRIVATE BANKS

This chapter presents the conclusions and results from the two-part survey response and details. Part one deals with the background information of respondents and Part two deals with examining the complexities of going towards risk-based lending in private banks in Myanmar.

4.1 Research Design

The goal of the analysis is to examine the complexities of transitioning to risk-based lending in Myanmar for private banks driven on assets. This research uses a method of systematic analysis. The data were obtained from both primary and secondary data sources for this study. The primary data questionnaires were sent to 60 credit and leasing staff from different banks and all 60 workers answered questions from the study.

Two portions of the questionnaires were split. Section A explains respondents ' demographic profiles. Section B is concerned with examining the complexities of transitioning to risk-based lending in private banks in Myanmar. Respondents were asked to rate their agreeable level using Likert’s 5 point scale ranging from 1=strongly disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=strongly agree. Likert’s 5 point scale ranging as following table (4.1).

Table(4.1) Mean Level of Agreement

The Average (Mean)	The Level of Agreement
1.00 – 1.80	Very Low
1.81 – 2.60	Low
2.61 – 3.40	Medium
3.41 – 4.20	High
4.21 – 5.00	Very High

Source: Tan &Teo, 2000

4.2 Background Information of Respondents

This segment discusses the age, location, level of education, banking and lending experiences and role of respondents.

Respondents by Gender

Demographically, respondents are asked to respond to their gender context. Table (4.2) shows the results of the respondents.

Table (4.2) Respondents by Gender

Gender	Frequency	Percentage (%)
Male	16	27
Female	44	73
Total	60	100

Source: Survey data (2019)

The table summarizes the findings of the interviewees ' gender analysis. The survey recorded 16 males as 27 percent and 44 females as 73 percent. The number of female respondents is higher than that of the male.

Position of Respondents

The respondents were also asked to respond to their current position. The result of an analysis of their employment level is shown in Table (4.3).

Table (4.3) Respondents by Position

Position	Number of Respondents	Percentage (%)
Director	0	0
General Manager	12	20
Manager	44	73
Supervisor	4	7
Total	60	100

Source: Survey data (2019)

The description of the role categories of respondents is mentioned in the Table (4.3). The result shows that 73% are executives, 20% are general managers, 7% are bosses and no managers respectively. The largest percentage of respondents in this survey by job is a manager, 73% of the total respondents.

Education Level of Respondents

The respondents were also asked to respond to their level of education. Table (4.4) shows the outcome of the analysis of their level of education.

Table (4.4) Respondents by Education Level

Education Level	Number of Respondents	Percentage (%)
Master	36	60
Graduate	24	40
Under Graduate	0	0
Total	60	100

Source: Survey data (2019)

In this sample, there are three levels of education for respondents. These are Teachers, Graduates and Graduates. Table (4.4) shows the number of respondents by level of education. In the undergraduate level, there are no respondents. The bachelor level is 24% and the master level of the respondents is 36%.

Respondents by Banking Experience

The respondents were also asked to respond to their years of banking experience. Table (4.5) shows the results of the study of the interviewees ' years of experience in banking.

Table (4.5) Respondents by Banking Experience

Year of Experience	Number of Respondents	Percentage (%)
Less than one year	0	0
Between 1 to 5 years	12	20
Between 5 to 10 years	28	47
Between 10 to 15 years	8	13
Over 15 years	12	20
Total	60	100

Source: Survey data (2019)

Table (4.5) is the study of interviewees ' years of banking experience. Table 4.5 shows that no interviewee with less than one year of experience in banking was able to respond with 20% banking experience from 1 to 5 years. Participants with 5 to 10 years ' banking experience had 47%; interviewees with 10 to 15 years ' banking experience had 13%; interviewees with 15 years ' experience had 20%, respectively. The largest component of this sample is the respondents with banking experience between 5 and 10 years.

Respondents by Lending Experience

The respondents were also asked to reply to their years of lending experience that describe years of their participation in credit activities. Table (4.6) shows the result of the analysis of their years of banking experience.

Table (4.6) Respondents by Lending Experience

Year of Experience	Number of Respondents	Percentage (%)
Less than one year	8	14
Between 1 to 3 years	32	53
Between 3 to 5 years	4	7
Between 5 to 10 years	8	13
Over 10 years	8	13
Total	60	100

Source: Survey data (2019)

Table (4.6) demonstrates the study of respondents ' years of lending experience. According to the table (4.6), respondents with less than one year's lending experience have 14 percent, lending experience is between 1 and 3 years. 53 percent, lending experience is between 3 and 5 years. 7 percent. Lend experience for respondents between 5 and 10 years is 13 percent, lending experience in 10 years is 13 percent. The largest proportion of respondents with loan experience between 1 and 3 years is this report.

Respondents by Lending Role

The respondents were also asked to respond to the credit position. The conclusions from the study of their lending positions are shown in Table (4.7).

Table (4.7) Respondents by Lending Role

Lending Role	Number of Respondents	Percentage (%)
Credit Administration	28	47
Credit Monitoring and Control	12	20
Asset and Collateral Management	12	20
Collection and Recovery	4	7
SME Financing	4	6
Total	60	100

Source: Survey data (2019)

Table (4.7) is the result of an analysis of the respondents ' lending role. As shown in the table (4.7), loan administration respondents are 47percent; credit reporting and control respondents are 20percent; asset and liquidity protection participants are 20percent and processing and recovery respondents are 7 percent, SME finance participants are 6percent respectively. The most important part of this analysis is respondents with the position of credit administration.

4.3 Employee Perception on Challenges of Risk-Based Lending

This segment analyzes the employee's understanding of the risks of lending based on risk using a 5 point Likert scale assessment. Applicants were asked to rate their pleasant levels on the 5-point scale of Likerts ranging from 1=totally disagree, 2=to disagree, 3=neutral, 4=totally agree and 5=totally agree.

This research focusses on 60 workers ' understanding of the risks of risk-based bank lending. A systematic questionnaire was carried out to analyze employee perceptions of the complexities of transitioning to risk-based lending in the following areas of bank concerns. The following factors examining the challenges of risk-based lending were the factors explored by Moody's analytics, author Helen Page (2016).

Challenges on Financial Information

Challenges on Predicting Cash Flow

Challenges on Rating Models

Challenges on Process Efficiency and Infrastructure

Challenges on Audited Reports

Challenges on Problem (Bad) Loan Management

Challenges on Business Model

4.3.1 Challenges on Financial Information

Many employees involved with credit and risk management face the challenges of financial information. The challenges include lack of detail of financial information, transparency of financial statement, timeliness of the financial information obtained from borrowers, trust in financial information and adequate financial information. The questions related to these considerations were posed.

Table (4.8) Challenges on Financial Information

Statement	Mean	Std. Dev.
I feel that the financial information provided by borrowers is not in details	3.53	0.87
I feel that the financial information provided by borrowers is not reliable	3.55	0.75
I do not receive financial information from borrowers on time	3.45	0.79
I do not trust the financial information provided by borrowers	3.43	0.89
I feel that the financial information from borrowers is not sufficient for loan assessment	3.55	0.95
Overall Mean Score	3.50	

Source: Survey data (2019)

The study in table (4.8) shows that the majority of the people who work with risk-based lending have been strongly agreed on the challenges because the overall average level was M=3.50. The strong challenges facing respondents are financial stability and data insufficiency, as the two mean values are of the highest ranking since the mean value is M=3.55. The lowest rating of respondents ' challenges is the question of financial morale, which has also been quite strongly agreed, and a lowest ranking of M=3.43 is a medium score. The remaining challenges are also extremely important and these show the average value for timeliness with M=3,45 and M=3,53 for level of detail.

4.3.2 Challenges on Predicting Cash Flow

The majority of employees involved in finance and risk-based loans face the difficulties of forecasting lenders ' cash flow. These include difficulties forecasting cash flow, optimistic estimates, and the degree of difficulty in measuring financial risk, data manipulation and incapacity to forecast cash flow. The interviewees were asked questions related to these challenges.

Table (4.9) Challenges on Predicting Cash Flow

Statement	Mean	Std. Dev.
I feel that predicting borrower’s future cash flow is difficult.	3.30	0.81
I feel that projected cash flow provided by borrowers is not realistic.	3.18	0.77
I feel that it is difficult to assess the financial risk of borrowers	3.53	0.95
I feel that borrower’s cash flow information is manipulated.	3.47	0.81
I am not able to analyze borrower’s cash flow.	3.28	0.88
Overall Mean Score	3.35	

Source: Survey data (2019)

The study in Table (4.9) shows that respondents decided equally on the problems of predating lenders ' cash flow, since the average score value is M=3.35. It can be concluded that workers have medium problems in forecasting lenders ' cash flow. The strong challenges faced by respondents are difficulty in accessing the lenders ' financial risk, as the mean value of the result was highest in the M=3,53 category. The medium challenge facing respondents is unrealistic cash flow data issues, as it shows the lowest medium value ranking with M=3.18. The remaining M=3.47 average values pose a great challenge for the manipulation of financial data and M=3.28 average values, M=3.30 are the medium difficulties in the estimation of cash flow and incapacity to interpret cash flow.

4.3.3 Challenges on Rating Models

Credit rating models are important tools to assess investor creditworthiness. Credit rating model reliability has a high impact on loan quality because various risk factors suggest the possibility of loan default. In particular, banks without credit rating agencies in the country require strong credit rating models, designed with high accuracy and data quality. Most of the workers

Table (4.10) Challenges on Rating Models

Statement	Mean	Std. Dev.
Rating models used by our bank have lack of accuracy	3.33	0.86
Rating models used by our bank have lack relevancy	3.45	0.77
I feel that the data used in rating models are not sufficient	3.48	0.91
I feel that the data used in rating models are not good quality	3.43	0.98
I am not able to apply rating models	3.27	1.04
I feel that it is difficult to request borrower's credit histories from Credit Bureau	3.38	1.11
I feel that lack of Credit Rating Agencies is a challenge for risk-based lending	3.53	1.02
Overall Mean Score	3.41	

Source: Survey data (2019)

Depending on the review of table data (4.10), respondents agreed highly on the problems of ranking models used in banks because the overall mean score is M=3.41. The study shows that the absence of credit rating agencies is the greatest issue since the average value is the highest in the M=3.53 ranking. The least important question in implementing the performance formulas is because the mean value is the lowest ranking in M=3.27. Credit rating models are an important component of credit rating functions. The problems faced by the workers are expected to be specific to the bank, such as inaccuracy, insufficiency and poor data consistency. The problems could be solved by externalizing the expert team or supplying the staff with effective training. The problems of the lending office and credit rating agencies are global and beyond the reach of the bank.

4.3.4 Challenges on Process Efficiency and Infrastructure

Most of the staff involved with credit and risk-based lending face challenges of service reliability and technology that are crucial to the production of loans. Poor infrastructure may contribute to process deficiencies. If the process is too manual, it takes too long and the process is too slow. The respondents were therefore asked to ask questions about inefficiency, lack of infrastructure efficiency and lack of infrastructure, consistency of decision making and preparation as shown in the table (4.11).

Table (4.11) Challenges on Process Efficiency and Infrastructure

Statement	Mean	Std. Dev.
I feel that loan application process of our bank has lack of efficiency.	3.15	0.63
I feel that the infrastructure of our bank is not efficient for credit risk assessment	3.02	0.89
I feel that the infrastructure of our bank is not sufficient for credit risk assessment	3.18	0.91
I feel that the quality of decision maker is poor	3.37	0.97
I feel that trainings are not provided for process efficiency	3.23	1.00
Overall Mean Score	3.19	

Source: Survey data (2019)

Based on the table analysis (4.11), the respondents have to face medium challenges in terms of process efficiency and infrastructure because the mean overall score is M=3.19. The study shows that the decision-making quality is poor and average, as the mean value of M=3.37 is highest. The study shows that the inefficiency of the credit risk evaluation infrastructure is the medium challenge, as the mean value of M=3.02 is the lowest. System quality and maintenance issues are largely the internal problems of the banks. The Bank will consider a solution to these problems. In the financial sector, time means money; inefficiency of processes and poor infrastructure causes every inefficient time to be counted as cash.

Challenges on Audited Reports

Financial statements are the primary information source to be obtained as banks order the borrower's required documents. Only accredited auditors will guarantee the accuracy of the financial statement. The most important challenges facing the audited monitoring team. These difficulties include difficulty in obtaining audited results, precision, trustworthiness, inaccurate evidence and failure to interpret audited reports. Respondents were asked the questions associated with these challenges.

Table (4.12) Challenges on Audited Reports

Statement	Mean	Std. Dev.
I have difficulty to get audited reports from borrower	3.55	0.87
I feel that the data in audited reports are not accurate	3.38	0.99
I feel that audited financial reports are not reliable.	3.42	1.00
I have difficulty to extract meaningful data from audited reports	3.25	0.97
I am not able to analyze the audited reports	3.22	1.01
Overall Mean Score	3.36	

Source: Survey data (2019)

Based on an analysis of table data (4.12), it has been observed that respondents face medium difficulties in the audited results, as the mean overall score is M=3.36. Respondents have great difficulties accessing audited reports from borrowers, as the mean performance rating is M=3.55. Nonetheless, problems in interpreting the audited results are medium challenges and M=3.22 indicates the lowest mean ranking. M=3,42 reveals the reliability of the audited reports is also a major challenge, M=3,38 shows the medium challenge in accuracy of audited reports, and M=2,35, shows the medium complexity in collecting significant data from audited reports respectively. It is not straightforward and not inexpensive to get financial reports signed by accredited auditors. Banks should find the solution to receive accurate and reliable audited borrower reports in good time.

Challenges on Problem (Bad) Loan Management

In this analysis, the term "issue loan" can also be used for other lateral use, such as poor lending or non-performing loans. Problem loan management is important, but due to the lack of reliable clients of problem loans, diligent risk assessment is more important before lending. Questions related to loan management training, specialist unavailability, early warning signal recognition, inadequate tracking and failure of respondents were therefore posed.

Table (4.13) Challenges on Problem (Bad) Loan Management

Statement	Mean	Std. Dev.
We do not have training for bad loan management	3.08	1.05
Our bank does not have credit specialist team	3.23	1.16
Our staffs have poor follow up for bad loan	3.18	0.95
Our staffs do not care for the early warning signals of possible loan default	3.40	0.98
We do not know how to manage bad loans	3.42	1.15
Overall Mean Score	3.26	

Source: Survey data (2019)

Based on the analysis of the table data (4.13), it is noted that respondents face medium problems in problem credit management because the average overall score is M=3.26. The workers face major difficulties in handling issue loans since the mean value of the ranking is the maximum M=3.42. The study shows that the challenge for poor credit management training is medium and the least important issue, since the average score value is the lowest ranking of M=3.08. The remainder of the mean values are M=3,40 and suggest medium difficulties in the consciousness of warning signals of potential credit defaults, M=3,23 which indicates this medium difficulty in the absence of a specialized team. The table (4.13) allows banks to provide more effective training for staff and workers with experience in risk-based lending.

Challenges on Business Model

The borrower's business model is one of the lender's most important requirements when making a lending decision. Banks would like to investigate the business model in which lenders ' current and future business plans for lending decisions are assessed. The business model's longevity would influence credit decision-making. Answers were asked questions relating to viability, significance, reality, failure to meet the current situation and failure to evaluate business model.

Table (4.14) Challenges on Business Model

Statement	Mean	Std. Dev.
I feel that the business models proposed by customers have lack of sustainability.	3.15	0.80
I feel that the business model proposed by customers is not relevant	3.23	0.77
I feel that the business model proposed by customers is not realistic	3.25	0.91
I feel that the business model proposed by customers is not suitable for current situation	3.32	0.87
I am not able to evaluate the business model	3.47	1.14
Overall Mean Score	3.28	

Source: Survey data (2019)

Depending on the study of the table data (4.14), interviewees have medium issues with the business model offered by lenders because the average value of the mean value is M=3.28. The greatest challenge is not being able to evaluate the business model because M=3.47 is the highest mean value among the scores. The less important problem in this analysis is that business models are unstable because the average value is the lowest with M=3.15. Banks have to ensure that the business models suggested by lenders are assessed closely and are realistic and suitable for the current situation.

Table (4.15) Summary of Challenges on Risk-Based Lending

No	Factors	Mean
1	Challenges on Financial Information	3.50
2	Challenges on Predicting Cash Flow	3.35
3	Challenges on Rating Models	3.41
4	Challenges on Process Efficiency and Infrastructure	3.19
5	Challenges on Audited Reports	3.36
6	Challenges on Problem (Bad) Loan Management	3.26
7	Challenges on Business Model	3.28

Source: Survey Data (2019)

The Table (4.15) presents the problems of financial information, cash flow predictions, rating models, efficiency and infrastructure in processes, audited reporting, (bad) loan management and business model. As shown in the Table (4.15), the overall average scores of challenges for financial data are M=3.50, which show that lenders need to find ways of obtaining financial data at a high level of detail, reliability, timeliness, trustfulness and adequacy. Nonetheless, overall average scores of process quality and infrastructure problems indicate the lowest M=3.19 ranking which indicates that credit grating needs of the lender are improved and ways to provide their credit department staff with the best infrastructure. Borrowers and government must find a solution to the problems and challenges of enhancing risk-based lending in Myanmar's banks.

CHAPTER V

CONCLUSIONS

This chapter is organized into three main sections: findings, suggestions and recommendations and need for further study on challenges of risk-based lending practice in Myanmar private banks.

5.1 Findings

The main objective of the study was to analyze the challenges of shifting towards risk-based from asset-based lending practice in Myanmar private banks. To meet this objective, a survey was conducted electronically via internet survey platform in questionnaire forms. According to the study of employee perception on the challenge of risk-based lending practice in Myanmar, this study found that most of the respondents rated the moderate and high agreeable level on the challenges of risk-based lending. This means that challenges actually exist in implementing of risk-based lending practice in Myanmar private banks. Myanmar is very new to the risk-based lending practice compared to the international banks. Shifting from a deeply rooted practice to new lending system is not easy task for many banks, especially banks in developing country like Myanmar where infrastructure is not ready and stable yet to adapt new practices and situation.

From the analysis in most of respondents indicated that they agreed the challenges of risk-based lending. The findings show that the key areas of challenges are existed in financial information and credit rating models since the mean value are highest among other challenges. The results of the survey match with the current situation in the financial sector. The financial information in reality received from borrowers is not reliable, not in detail, not sufficient and lack of timeliness. Therefore, it high impact on credibility of data and difficult for staffs to conduct the proper credit risk assessment.The analysis shows another serious area of challenge is in credit rating models. That may also relate to the lack of credit rating agencies in Myanmar. Credit Bureau was granted the license to operate in recent year in 2018 but still not fully functional according to the news source. The study indicated that most of banks in Myanmar need more staffs that expertise in credit risk assessment and rating models and well-equipped training should be given to the staffs who are involving in the risk-based lending assessment process.

5.1 Suggestions and Recommendations

According to the study, it is noted that are challenges and issues need to be resolved regarding risk-based lending practice implemented in Myanmar private banks. This is assumed that there two types of root causes which created the issues and challenges in risk-based lending implementation. They are internal issues which resolved within the banks itself and which are in the control of the banks. The latter is external issues and challenges which are beyond the control of the banks. It cannot be resolved immediately in short term. The issues and challenges with higher mean value were supposed to be high impact on the banks. Based on the analysis done on this study, banks need to set the strict instruction for borrower to obtain financial information which is assured only by audited firms recognized by lender to improve the credibility of the information. As per the study, the employees are facing the high challenges in rating model which involves very detailed analysis of the past, present and future prospects of the company, industry, management, competition, characteristics and credit histories of the borrowers. Banks need to find the solution to improve the reliability and accuracy of data if spreadsheets are used manually in credit rating model. This challenge is associated with the absence of crediting rating agencies and non-functionality of Credit Bureau in Myanmar. For the medium challenges which are related to difficulty in predicting cash flow, process efficiency and infrastructure, obtaining audited reports, problem (bad) loan management and sustainability of business model, bank should provide good quality of infrastructure and well-designed training to the staffs to improve the process efficiency.

5.2 Need for Further Study

Further study should use the different parameters to examine the challenges of risk-based lending practices in Myanmar. And also it is highly advisable to explore challenges from different point of view on risk-based lending. The period of the risk-based lending implementation in Myanmar private banks was very short and immature stage which started in 2017 after CMB release the regulations which allowed the relaxation of the collateral requirement for SME borrowers. That is why further study should be conducted after some years of time when most of the banks become familiarized with the new lending methodology.

REFERENCES

1. Anthony Saunders, Linda Allen. (2002), Credit Risk Measurement, Wiley
2. ASEAN-China-UNDP Symposium. (2017), Development Finance Assessment Snapshot Myanmar
3. Ben Amoako, Adul & Joseph P. Eshun (2018), SME Financing in Africa: Collateral Lending vs Cash Flow Lending
4. Bart Baesens, Daniel Rösch, Harald Scheule (2016), Credit Risk Analytics
5. Ciby Joseph.(2013). Advanced Credit Risk Analysis and Management
6. FMR (2018). Myanmar Financial Services Report
7. GIZ (2018). Myanmar’s Banking Sector in Transition
8. GIZ (2013). Myanmar’s Financial Sector: A Challenging Environment for Banks
9. Helene Page. (2016). Moody’s Analytics Seven key challenges in assessing SME credit risk
10. John Schellhase and Lena Sun.(2017).The Banking Sector in Myanmar: An Assessment of recent Progress
11. KPMG. (2017), Facing the Financial Services Industry: Ten Key Credit Risk & Lending Challenges
12. Ioannis Akkizidis, Manuel Stagars (2016), Marketplace Lending: Financial Analysis and the Future of Credit:Wiley
13. Joël Bessis (2015), Risk Management in Banking.Wiley
14. Mark A. Condon, (2006).Risk-Based Lending Best Practices, CUNA’s Credit Union Lending Survey.
15. Norman E. D’Amours (1999).Risk-Based Lending: NCUA Letter to Credit Unions
16. OCED (2015). New Approaches to SME and Entrepreneurship
17. Roland Berger (2016). Myanmar Banking Sector 2025:The Way Forward
18. Ulla Balle. (2015). Cash Flow Based Lending For SMEs: FSD Kenya

Appendix
Yangon University of Economics
Department of Commerce
Master of Banking and Finance (MBF) Programme
Questionnaire
Challenges of Shifting Towards Risk-Based from Asset-Based Lending Practice in Myanmar Private Banks

FOREWORD

i. I guarantee the information is for academic use only, not for commercial.
ii. The name of the respondent will never be revealed in any of my study.
iii. The researcher asks for your cooperation for the success of this study.
iv. All questions and response are kept in confidential.

Section – A: Background of Respondent

1. Gender of Respondent
    a) Male
    b) Female
2. Position of Respondent
    a) Director
    b) General Manager
    c) Manager
    d) Supervisor
3. Highest Level of Education Attained
    a) Under-Graduate
    b) Graduate
    c) Master
    d) PhD
4. Number of Years in Banking
    a) Less than one year
    b) Between 1 to 5 years
    c) Between 5 to 10 years
    d) Between 10 to 15 years
    e) Over 15 years

5. Number of Years in Lending

a) Less than one year
b) Between 1 to 3 years
c) Between 3 to 5 years
d) Between 5 to 10 years
e) Over 10 years

6. Lending Role in Credit Department

a) Credit Administration
b) Credit Monitoring and Control
c) Asset/Collateral Management
d) Collection and Recovery
e) SME Financing

Section – B: Challenges of Shifting Towards Risk-Based Lending

Please state your agreeable level upon the challenges statement according to:

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

Sr.	Challenge Statement	Agreement Level				
		1	**2**	**3**	**4**	**5**
Financial Information						
7	I feel that the financial information provided by borrowers is not in details.	1	2	3	4	5
8	I feel that the financial information provided by borrowers is not reliable.	1	2	3	4	5
9	I do not receive financial information from borrowers on time.	1	2	3	4	5
10	I do not trust the financial information provided by borrowers	1	2	3	4	5
11	I feel that the financial information from borrowers is not sufficient for loan assessment	1	2	3	4	5

Sr.	Challenge Statement	Agreement Level				
		1	**2**	**3**	**4**	**5**
Cash Flow						
12	I feel that predicting borrower’s future cash flow is difficult.	1	2	3	4	5
13	I feel that projected cash flow provided by borrowers is not realistic.	1	2	3	4	5
14	I feel that it is difficult to assess the	1	2	3	4	5
15	I feel that borrower’s cash flow information is manipulated.	1	2	3	4	5
16	I am not able to analyze borrower’s cash flow.	1	2	3	4	5

Sr.	Challenge Statement	Agreement Level				
		1	**2**	**3**	**4**	**5**
Rating Model						
17	Rating models used by our bank have lack of accuracy	1	2	3	4	5
18	Rating models used by our bank have lack relevancy	1	2	3	4	5
19	I feel that the data used in rating models are not sufficient	1	2	3	4	5
20	I feel that the data used in rating models are not good quality	1	2	3	4	5
21	I am not able to apply rating models	1	2	3	4	5
22	I feel that it is difficult to request borrower’s credit histories from Credit Bureau	1	2	3	4	5
23	I feel that lack of Credit Rating Agencies is a challenge for Risk Based Lending	1	2	3	4	5

Sr.	Challenge Statement	Agreement Level				
		1	**2**	**3**	**4**	**5**
Process Efficiency and Infrastructure						
24	I feel that loan application process of our bank has lack of efficiency.	1	2	3	4	5
25	I feel that the infrastructure of our bank is not efficient for credit risk assessment	1	2	3	4	5
26	I feel that the infrastructure of our bank is not sufficient for credit risk assessment	1	2	3	4	5
27	I feel that the quality of decision maker is poor	1	2	3	4	5
28	I feel that trainings are not provided for process efficiency	1	2	3	4	5

Sr.	Challenge Statement	Agreement Level				
		1	**2**	**3**	**4**	**5**
Audited Reports						
29	I have difficulty to get audited reports from borrower	1	2	3	4	5
30	I feel that the data in audited reports are not accurate	1	2	3	4	5
31	I feel that audited financial reports are not reliable.	1	2	3	4	5
32	I have difficulty to extract meaningful data from audited reports	1	2	3	4	5
33	I am not able to analyze audited reports	1	2	3	4	5

Sr.	Challenge Statement	Agreement Level				
		1	**2**	**3**	**4**	**5**
Problem (Bad) Loan Management						
34	We do not have training for bad loan management	1	2	3	4	5
35	Our bank does not have credit specialist team	1	2	3	4	5
36	Our staffs have poor follow up for bad loan	1	2	3	4	5
37	Our staffs do not care for the early warning signals of possible loan default	1	2	3	4	5
38	We do not know how to manage bad loans	1	2	3	4	5

Sr.	Challenge Statement	Agreement Level				
		1	**2**	**3**	**4**	**5**
Business Model Sustainability						
39	I feel that the business models proposed by customers have lack of sustainability.	1	2	3	4	5
40	I feel that the business model proposed by customers is not relevant	1	2	3	4	5
41	I feel that the business model proposed by customers is not realistic	1	2	3	4	5
42	I feel that the business model proposed by customers is not suitable for current situation	1	2	3	4	5
43	I am not able to evaluate the business model	1	2	3	4	5