CREDIT RISK MANAGEMENT PRACTICES AND BANKS’ PERFORMANCE IN PAKISTAN

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ABSTRACT
The main objective of this study is to investigate whether the credit risk management of Pakistan's commercial banks listed on the Pakistan Stock Exchange is linked to financial performance. For this purpose, the researchers have attempted to analyze the data trends of five major banks of Pakistan as a proxy representation of the entire banking sector of Pakistan. Five (5) years of panel data collected from the State Bank of Pakistan Annual publication and annual reports of respective banks was used to conduct the research. The study found that underperforming Credit Risk Management (CRM) loans and Capital Adjustment Ratios (CDRs) have an impact on the financial achievement of Pakistani commercial banks as measured by return on equity (ROE) and return on assets. For panel data analysis, inferential statistics (regression models) were used in this study. After analyzing the data, the researcher found that CRM has a significant impact on the financial performance of Commercial Banks of Pakistan. Furthermore, the researcher encourages the Pakistani banks to grow their profitability in terms of better CRM. Pakistan's banking sector must develop suitable CRM strategies and policies through a sound credit appraisal before lending to consumers and banks; an appropriate CRM mechanism must be developed, and the credit awards system must be thoroughly reviewed, properly informed and used to repay loans. Pakistani Banks would develop and implement strategies to improve their performance & competitiveness as well as limit their lending risk exposure.

Keywords: Credit Risk; Non-Performing Loans; Capital Adequacy Ratio; Return on Equity (ROE); Return on Assets (ROA).

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INTRODUCTION

Banks are exposed to various business risks by providing financial services and other related matters exposed to some financial risks including foreign exchange risk, volatility risk, operation risk, and credit risk, etc. (Alloyo, 2010). Commercial banks have encountered various problems and issues over some years, but the major reason and problem area were terms as serious financial regularities which affect standardized credit borrowings and poor monitoring of such borrowings. Non/poor monitoring and management of nonperforming loans are the major areas that needed to be controlled and to grow in the competitive market (State Bank of Pakistan, 2020).

A recent study by Sleimi (2020), emphasized that the components of risk management procedures had a good and significant influence on bank performance. These assertions have been extensively validated in the western contexts and emphasize the need for risk management in the diverse banking environment. According to Li & Zou 2014, banks face a variety of risks, all of which play a critical role in ensuring that their objectives of good banking management to earn maximum income for the benefit of shareholders and stakeholders are met. Banks’ management manages their various cash measurement tools to meet their daily financial requirement. In this essence Yusuf (2003) suggested that banks and financial institutions are facing various risks. These risks include interest rate risk, foreign exchange, political risk, market risk, operation risk, and credit risk (Cooperman, Gardener & Mills 2000). According to Harvett (2013), risk management is a continuous process that helps in minimizing the bad impact of unknown possible losses.

There are various processes of risk management which include measurement using better tools and control. Some researchers like Ngare (2008), Waweru and Kalani (2009), and Buchan (2011) explained various techniques which help managers to minimize risk management. Every organization, particularly banks and financial institutions, have to achieve their objectives and risk management helps these issues to minimize foreign exchange losses, effective control of cash flow, and earnings from the business at the time of business uncertainties (Chapman and Ward 2010). Survivals of the banks and financial institutions are in continuous growth due to increase in their incomes. Banking business otherwise is very much sensitive as almost 85% of bank liabilities comprise on deposit (Husted 2005).

However, emphasizing on banks credit management, Mbole (2004) determined that commercial banks accept deposits and then provide them to needy borrowers to stimulate the economy and to get income in the shape of interest/profit.
In essence, the loan portfolio of the banks is very much important as unprofessional decisions may result in default risk which has a very much impact on the financial stability of banks and imprudent credit may result in losses which may also result in bankruptcy. Even in developing countries like Kenya, banking plays a critical role in economic development. Richard (2006) highlighted that the business community of Kenya is demanding various credits from banks and financial institutions but to meet the unforeseen default risk. The banking industry gathers useful information from its borrowers and creditors. Then each commercial bank has a capable risk management system to evaluate these demands. Kimondo, Serakwane, and Davel (2012) concluded that the banking industry is very cautious to reduce their expected losses in the shape of defaults. All the commercial banks are properly and effectively monitoring the risk management system to provide credit with minimum risk.

CRM is also critical because banks are responsible for depositing depositors' funds. These funds are received on one end of the bank and are shared on the other end as a credit to the business community as well as other sectors to earn interest for the earnings of the banks. The fund-based business interest/markup on credit has major shares which are reflected in these banks' balance sheets. Thus, according to Shaikh et al. (2017), there is a need for better credit risk management in banks.

The primary purpose of this study is to see how much CRM is used for various types of risks by banks in Pakistan. This research also investigates the impact on the profitability of banks in Pakistan of current CRM practices.

**STATEMENT OF THE PROBLEM**

Banks are exposed to various business risks by providing financial services and other related matters exposed to some financial risks including foreign exchange risk, volatility risk, operation risk, and credit risk, etc. (Alloyo, 2010). Commercial banks have encountered various problems and issues over some years, but the major reason and problem area were terms as serious financial regularities which affect standardized credit borrowings and poor monitoring of such borrowings. Non/poor monitoring and management of nonperforming loans are the major areas that needed to be controlled and to grow in the competitive market (State Bank of Pakistan, 2020). Therefore, the researchers in this study aim to know that up to what extent practicing credit risk management tools can affect the level of profitability of the concerned banks listed at PSE – 100 Index.
RESEARCH OBJECTIVES
Following are the main objectives of the study.

1. To look at how the CAR (Capital Adequacy Ratio) affects the profitability of PSE-listed banks.
2. To look at the effect of non-performing loans (NPLs) on the performance of banks listed on the PSE (ROA & ROE).

SIGNIFICANCE OF THE STUDY
The theme of this research helps the bank management to perform reasonable risk management and this study also establishes a relation of credit risk to banks income generation as with the establishment of prudent risk management. Banks working in Pakistan try their best to control nonperforming loans, credits and subsequently result in the achievement of income goals.

This research can also be used as a guide for other scholars who want to complete their RM (risk Management) research and its effect on bank credit efficiency, especially in commercial banks in Pakistan.

LITERATURE REVIEW
Credit risk management is critical to the success of a financial institution's operations. Good and efficient credit management needs the presence of a suitable credit risk environment that specifies operations by adopting efficient loan processing. To maintain reasonable credit administration requires search, analyzing, and improving the stages of a good control environment to minimize credit risk.

Ali et al. (2020) stated that banks have numerous drawbacks, the most prominent of which are small sample size and a cross-sectional study, both of which restrict the generalizability of the findings. The fact that there are so few banks in Azad Kashmir is the source of the small sample size. Furthermore, according to this study, bankers should concentrate on risk management techniques as well as managing experience to enhance bank performance and achieve a competitive edge through the use of managerial skills.

According to Sathyamoorthi (2020), the loan deposit ratio has a negative and significant impact on return on assets and return on equity. The findings suggest that banks should strike a healthy balance between financial risk management methods and financial performance by utilizing proper market, credit, and liquidity risk management procedures that will preserve their banks' safety while also delivering positive profits.

Both credit risk and ROA, as well as credit risk and ROE, have a negative relationship, according to Ekinc (2019). This research indicates that there is a relationship between credit
risk management and deposit bank profitability in Turkey from 2005 to 2017. As a result, banks should place a higher focus on credit risk management, particularly the control and monitoring of non-performing loans. New credit risk management methods should also be given more consideration by managers.

According to Rehman (2019), corporate governance has the greatest impact on credit risk management (CRM), followed by diversification, hedging, and, finally, the bank's Capital Adequacy Ratio. The relevance of these four risk management approaches for commercial banks in addressing credit risk is emphasized in this study.

Credit risk management indicators have a significant influence on the financial performance of selected public sector banks in India, according to a study conducted by Ali and Dhiman (2019). According to the empirical data, ROA (profitability) is positively associated with CAR, management quality, and earnings ability, but negatively associated with AQ and liquidity.

Increased competition, according to Bülbül et al. (2019), is forcing banks to use advanced risk management strategies. Sector specialization in the loan market helps credit portfolio modeling, but credit risk transfer is hindered. Chukwunulu et al. (2019) discovered a negative and significant relationship between risk management and bank performance when it comes to credit risk.

Strong credit evaluation builds the framework for effective credit risk management and provides firms with a competitive advantage in the marketplace Catherine, 2019. As a result, credit assessment is important to the survival and profitability of a bank. The value of adjusted R Square at a 95% confidence interval was 0.978, suggesting that the bank's performance varied by 97.8 percent due to changes in client appraisal, credit risk control, and risk diversification.

Only a few commercial institutions, according to Wachira (2017), adopt a quantitative credit scoring technique. Credit officers at all banks do the initial screening, and approval is granted at various levels based on the amount. The majority of banks investigate a borrower's post-borrowing behavior. Finally, credit risk management affects the performance of commercial bank loans. As a result, managers should more accurately estimate a customer's ability to repay, as better screening leads to greater commercial bank performance.

While all of these factors have an inverse association with a bank's financial performance, Musyoki and Kadubo (2012) found that the default rate, when compared to the other credit risk management indicators, is the strongest predictor of a bank's financial success. The goal
is to guide banks on how to develop and implement solutions that will not only minimize their credit risk exposure but also increase their profitability and competitiveness.

Parrenas (2005) has defined credit management as a process of good risk management by adopting suitable controls which are associated with such risks. Credit risk also measures reserves and foreign exchange and maintenance of required reserves. Counterparty risk is very important and plays a vital legal risk. For this purpose, every commercial bank defines its strategy to motivate the credit environment. The organizations and banks which do not judiciously use their credit decisions are exposed to credit risks and need a lot of legal efforts for the repayment of their credits. Various aspects of credits are taken into consideration before granting any financial credit. Generally, those commercial banks and institutions that use the best CRM have good repayment ratios and the losses from bad loans are minimized. However, there are still certain areas where the credit risk could not be met to zero, but it can be minimized in the shape of various incentives to borrowers and very few portions are written off. The research focuses on practical and hypothetical analysis to determine its impact on credit risk management in the financial sector, as well as introduces a commercial bank outlook and the research hypothesis. If the credit is imprudent and the borrowers have no capacity for the repayments, then defaults occur (Gestel & Baesens, 2008).

Lapteva (2009) highlighted in his research that good and efficient credit risk management plays a very important role in the development and income generation of commercial banks. Various technological tools have been introduced to help disbursement of credit by providing timely decisions and also result in less credit risk management cost. This needs complete ways of partners and contractors

Psillaki, Tsolas, and Margaritis, (2010) found that CRM is widely recognized as playing a critical role in the development of commercial banks and the stimulation of business activity. The banks provide financial assistance to the community to sustain growth and stimulate the capital market in the economy. “The default of a small number of customers may result in a very large loss for the banks” (Gestel & Baesens, 2008). The Basel committee has given various recommendations at the time of disbursement as early warning signals for the management of credit risk. Hakim and Neaime 2001, have researched various Egypt and Lebanon banks and by analyzing their risk management. They were found according to sound credit policy applicable to commercial banks' rules and regulations.

Similarly, Hosna Manzura and Juanjuan's (2009) study focused on non-performing loans and found that they had a direct impact on bank profitability as measured by the return on equity
(ROE) and capital adequacy ratio, but similar effects were observed in a variety of other banks and organizations. Besides, Njanike (2009) explained the usefulness of effective risk management and violations often carry the result of financial losses in the banking sector. Better credit risk management tools, which the bank used to implement unsecured credits, are highlighted by Gakure, Nagugi, Ndwiga, and Waithaka (2012). Their study looked into a variety of financial risks that limit banks' ability to make pre-lending decisions to meet their business objectives. Kolapo, Ayeni, and Oke (2012) explained the various risk of the banking sector including credit risk management which affects bank performance relation with measurement tools of ROA which is cross-sectional and variant. Thus, measurements of risk of commercial banks were not analyzed in this method of the result. Kimondo, Serakwane, & Davel, (2012) introduced various other parameters of risk management and their values for banking financial performance. According to their research, these control parameters have negative contact on bank financial performance. The commercial banks at the time of credit decision consider default for bank various financial performance. However, Nawaz and Munir (2012) stated that credit risk management is the most effective tool for increasing revenue and that as a result, bank management must implement a very prudent credit policy that has an impact on bank profitability in the form of nonperforming loans.

**THEORETICAL FRAMEWORK**

This research is being carried out to see how credit risk management impacts a bank's earnings. Below is a model showing dependent and independent variables.

| Independent Variables         | Dependent Variables |
|------------------------------|--------------------|
| Non-performing loans         | ROA                |
| Capital Adequacy Ratio       | ROE                |

**RESEARCH HYPOTHESES**

Based on the literature review, following hypotheses are developed.

\[ H_{A1}: \text{There is a significant effect of the CAR (Capital Adequacy Ratio) on the profitability of listed banks at PSE.} \]

\[ H_{A2}: \text{There is a significant effect of NPL (Non-Performing Loans) on the profitability of listed banks at PSE.} \]
RESEARCH METHODOLOGY

This section contains field-tested study concepts and techniques. The study's design, target population, sample size, sampling procedure, data collecting, and analysis are all discussed in detail. The theoretical backdrop for investigating the relationship between credit risk management activities and commercial bank performance is as follows:

\[
Pit (ROA, ROE) = \beta_0 + \beta_1NPLR_t + \beta_2CAR_t + \epsilon_t
\]

Here Pit stands as a test of profitability for financial performance by trustworthy variables (ROA, ROE). \(NPLR_t\) is the first independent bank I loan risk management variable at times \(t\) and \(CAR_t\) is the second independent bank I loan risk management variable at times \(t\). \(0\) is a permanent representational variable.

**Table 1. Study Variables and Formulas**

| Name of Variable       | Formula                                |
|------------------------|----------------------------------------|
| Capital Adequacy Ratio (CAR) | Tier 1 Capital + Tier 2 Capital to Total Risk-Weighted Assets |
| Non-Performing Loan (NPLAR) | Non-Performing Loan Ratio to Total Loan |
| Return of Assets (RoA)   | Net Profit to Total Asset               |
| Return on Equity (RoE)   | Net Profit to Total Equity              |

**Nature of the Study**

It has a descriptive as well as a co-relational nature. Secondary data will be gathered from respective banks' annual reports, as well as the State Bank of Pakistan's (SBP) publication "Financial Statement Analysis of Financial Institutions 2013-2017" for the study's years.

**Target Population and Sample Size**

Presently, thirty-one (31) banks are operating in Pakistan in which the top 5 banks will randomly be selected based on the performance in the year 2020 declared by SBP. Banks will include ABL (Allied Bank Limited), HBL (Habib Bank Limited), NBP (National Bank of Pakistan), UBL (United Bank Limited), and MCB (Muslim Commercial Bank). Thus, the study includes both nationalize and privatize banks which have great financial services in Pakistan.

**Data Collection**

The data were collected from SBP (State Bank of Pakistan) publications (Financial Statement Analysis) of the financial sector in Pakistan from the period of 2016-2020; annual reports and balance sheets of respective commercial banks were available on their websites.
RESULTS

Inferential Statistics

**H\text{A1}:** There is a significant effect of the Capital Adequacy ratio on the profitability of listed banks at PSE.

**Table 2. Regression Model**

| IV                          | R    | R²   | Adj R² | B    | F     | Sig  |
|-----------------------------|------|------|--------|------|-------|------|
| Capital Adequacy Ratio      | .680 | .469 | .460   | 0.162| 476.2 | .000 |

*Dependent Variable: Profitability*

The regression model output shows that there is a significant effect of CAR on the profitability of listed banks at PSE (P = .000 < .05). Table 1 shows the effect of independent variables on the dependent variable that \( R^2 = .460 \) which designates that capital adequacy ratio factors explain 46% variance in Profitability. The table further portrays the B value indicates that one unit increase in capital adequacy ratio then 0.162 SD unit will increase in Profitability. Even the F-value is the sig-value (F = 476 > 4). On analyses we can assume that the profitability of listed banks in PSE is significantly affected by the Capital Adequacy Ratio, meaning that researchers are excluded from the null hypothesis.

**H\text{A2}:** There is a significant effect of non-performing loans on the profitability of listed banks at PSE.

**Table 3. Regression Model**

| IV                       | R    | R²   | Adj R² | B    | F     | Sig  |
|--------------------------|------|------|--------|------|-------|------|
| Non-performing loans     | .658 | .435 | .425   | 0.53 | 472.33| .000 |

*Dependent variable: Profitability*

The regression model output indicates that there is a significant effect of non-performing on the profitability of listed banks at PSE (P = .000 < .05). Table 1 shows the effect of independent variables on the dependent variable that \( R^2 = .435 \) which designates that the non-performing factor explains 43% variance in Profitability. The table further portrays the B value indicates that one unit increase in non-performing then 0.53 SD unit will increase in Profitability. The F-value is also signifying the sig-value (F = 472 > 4). Therefore, we can say that there is a significant effect of non-performing on the profitability of listed banks at PSE, so the researcher falls in the exceptions of a null hypothesis.
CONCLUSION AND DISCUSSION

Banks are seen as the backbone for the acceleration of economic activity in our fast-paced world since they play such an important role. However, banks must deal with a variety of dangers because the risk is inherent in banking operations, the most serious of which is credit risk. For that purpose, the researcher concluded that CRM has a positive impact on commercial banks' financial performance, according to the findings of this study. This study included two variables as determinants of CRM: NPLR and CAR. The findings show that better CRM improves financial performance (ROA & ROE). According to the study's regression results, effective CRM can boost overall financial performance based on the study's independent variables (NPLR & CAR). Because CRM is so important, it is recommended that a strict CRM system be implemented. Because credit risk management has such a large impact, it is recommended that managers follow a strict CRM system and spread their bank's earning activities.

Commercial banks' low financial performance in Pakistan has been attributed to poor credit valuation and weak risk management policies, a substandard loan portfolio, and bank registration with insufficient resources. Long-term liabilities are extensively used by Pakistani commercial banks, resulting in high borrowing costs and the possibility of a bank collapse.
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