

Impact of Credit Risk on the Profitability of Banks: A Case of Retail Banking Products

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Abstract

Retail banking also known as consumer banking is the provision of services such as credit cards, auto financing, consumer durable loans, and other personal loans by a bank to individual consumers rather than to corporations, companies, or other banks. The main purpose of the research is to analyze the impact of credit risk of retail banking products on the profitability of the commercial banks of Pakistan. Return on Asset (ROA) and Return on Equity (ROE) are used as dependent variables (DV) to measure the profitability of commercial banks while infection ratios of Credit Cards (CC), Auto Loans (AL), Personal Loans (PL), and Consumer Durables (CD) are used as Independent Variables to measure credit risk. Liquidity Ratio (LR) and Capital Adequacy Ratio (CAR) are used as control variables. Simple Regression analysis is performed on time series data of all 30 commercial banks working in Pakistan, from the year 2004-2020 using SPSS. Overall results of this study show there is negative impact of credit risk of retail banking products on the profitability of commercial banks. This study is helpful for policy maker in understanding the contribution of retail banking products to the overall credit risk of commercial banks and they will be able to manage their credit risk more effectively by devising various policies regarding the credit risk related to retail banking products. It will help the management of commercial banks to review their retail banking portfolio and improve their policies to increase the profitability of commercial banks.

Keywords: *Credit Risk, Profitability, Credit Card (CC), Auto Loan (AL), Personal Loan (PL), Consumer Durables (CD).*

Introduction

Retail banking also known as consumer banking is the provision of services such as credit cards, auto financing, consumer durable loans, and other personal loans by a bank to individual consumers rather than to corporations, companies, or other banks. The worldwide banking industry has undergone a significant transformation recently. The improved operating environment for the banking sector, underpinned by liberalization, globalization, and privatization, along with advanced information technology, has resulted in an intensely competitive environment in the banking industry (Black et al., 2010). Research conducted by

Appannan et al. (2013) revealed that in this era of advanced technology, the service sector has a significant impact on the economic growth of any country. The banking sector plays an active role in the economic and social development of a country. Managers in the service sector like banking are more focused on client satisfaction by offering better consumer products. Due to these reasons, retail banking is becoming an emerging sector in Pakistan. Most of the banks in Pakistan are trying to have a good marketplace by offering more attractive and better retail banking products to their customers. The key factors for success in the banking industry are service quality, type of product, charges for the product, and customer satisfaction (Onuonga, 2014). Improved and better products and services ensure customer loyalty (Barodiya & Chauhan, 2015) as a result it improves the profitability of the bank (Melzer & Morgan, 2015). The main purpose of the research is to analyze the impact of credit risk of retail banking products on the profitability of the commercial banks of Pakistan. Credit risk is one of the important risks in banks and there is a need for effective management of this risk as it impacts the profitability of banks (Ahmed & Malik, 2015). According to the definition of the Basel Committee, credit risk is the risk of a borrower not being able to pay or not willing to pay. Credit risk has the greatest impact on a bank's performance (Ahmed & Malik, 2015). It is a risk that occurs in loan transactions where the customer might default, due to inability to repay (Barodiya & Chauhan, 2015). Abbas et al (2014) indicated that the credit risk of a bank can be expected due to inefficient credit guidelines, low capital adequacy ratios, and liquidity, inadequate institutional capacity, and an inefficient board of directors. Hence, we can say that there is a need for effective risk management to reduce losses and increase.

Credit risk in the banking sector is measured by the Non-Performing Loans Ratio (NPLR) or infection ratio. The infection ratio (non-performing loans to advances) of retail banking products measures the probability of default of credit so it is directly related to credit risk which means higher the infection ratio, higher will be the credit risk. A change in infection ratios of retail banking products directly affects the receivable expenses of commercial banks as a result the profit of commercial banks is affected. In our research infection ratios of credit cards, consumer durable loans, auto loans, and other personal loans advanced by commercial banks of Pakistanis is used to measure the credit risk of retail banking products. The impact of credit risk on the profitability of commercial banks has been analyzed by various researchers. However, no research could clearly explain the relationship between the credit risk of retail banking products of commercial banks and the profitability of these banks. The reason might be the non-development of retail banking products markets in Pakistan as compared to Europe and the US. Therefore, we found a research gap to measure the impact of credit risk measured by infection ratios (non-performing loans to total advances) of retail banking products, on the profitability of commercial banks in Pakistan. This research is helpful for the management of commercial banks to review their retail banking portfolio and improve their policies to increase the profitability of commercial banks.

Significance of Study

Commercial banks are playing a vital role in the development of any country. They create business and job opportunities and serve society in several ways. In fact, Banks are running different businesses and all of this business is mostly based on providing loans to firms, individuals, and the general public. Therefore, this study is extremely helpful for the management of commercial banks to review their retail banking portfolio and improve their policies to increase the profitability of commercial banks. It helps policy makers, regulators, government and management of commercial banks to devise effective policies to manager retail banking portfolio and serve the public in better way which may lead to not only increasing the profitability of banks but also contribute to socio-economic welfare of general public.

Objectives of the Study

The main objectives of the research are:

1. To analyze the impact of credit risk of retail banking products on the profitability of the commercial banks of Pakistan.
2. To analyze the impact of infection ratio of Credit Cards (CD) on the profitability of commercial banks in Pakistan.
3. To analyze the impact of infection ratio of Auto Loans (AL) on the profitability of commercial banks in Pakistan.
4. To analyze the impact of infection ratio of Consumer Durables (CD) on the profitability of commercial banks in Pakistan.
5. To analyze the impact of infection ratio of Personal Loans (PL) on the profitability of commercial banks in Pakistan.

Literature Review

Commercial banks' performance and profitability have been of keen interest for research in the past. There had been a lot of work done for profitability based on different tools to measure it. The main indicators which different researchers have discussed to measure profitability are Return on Assets (ROA) and Return on Equity (ROE). These Specific indicators are showing the performance and how effectively the profit is gained from banking activities. According to Noman, Pervin, & Chowdhury (2015), the main determinant of profitability is ROA along with many others. According to Kiarie (2013) that the profitability of Commercial banks highly depends on the internal factors of bank performance.

These internal factors are net income before and after-tax and against capital, reserve factors, and total assets. Although according to these researchers, size of the banks has a positive impact on profitability there is a need to have better customer services and products to attract more customers. The size and products affect the profit of banks. There is a need to have a better product and small size to get better profit for banking sector (Agarwal et al., 2007). Some internal and external factors affect the profitability of the banks. Internal factors comprise credit risks, size, operational efficiency, and products while external factors are comprised of market competition, and monetary policy (Azam, 2012).

Ahmed and Malik (2015) researched the relationship between measurements of credit risk to the performance of banks. They collected data from secondary sources to check through regression analysis and find a positive impact of credit management on the performance of banks in the United Kingdom. Retail banking services are attached to massive competition. The improvement of products and service ensure customer loyalty as a result it improves the profitability of the bank (Abbas et al., 2014) and (Barodiya & Chauhan, 2015) and (Akhtar et al., 2011a). Credit risk directly belongs to consumer behavior and products offered and is one of the important risks in banks. there is a need for effective management of credit risk for the profitability of their own business (Elbarouki, 2016). Getting into default of a customer (Consumer) may have a bad for the banks.

Resulting in a very large loss for the bank. Credit risk is a risk of a borrower not being able to pay or not willing to pay. Retail banking products need to be properly managed as these products can be a reason for credit risk loss to the banks even when a customer with high credit quality has to get into default (Bizuayehu, 2015). A feasible solution to such challenges is offered by better credit risk management. Credit risk management is assumed to be a critical component of a comprehensive approach to risk management. The growth and sustainability of the banking sector depends on better risk management (Staikouras & Wood, 2011). In Pakistan both conventional and Islamic banks are offering retail banking products to improve their profits (Akhtar et al., 2011a). Banks need to introduce new and innovative products for increasing their profitability and consumer loans help banks in this regard as these loans are less expensive (Raashid et al., 2015)

According to Schreiner et al. (1996), credit card has increased the new business opportunities for banks. They improve the purchasing power of the customers. It is one of the important causes of overspending.

Credit cards are a source to earn money in better offering to the customer as their purchase power increases and they are willing to spend more money to purchase items of daily life. There is an Impact of credit cards on consumer debts, aggressive spending encouraged by the client using credit cards, and card holders willing to purchase more aggressively and spend more than consumers who were not holding credit cards for the same products. Instead of speeding their savings from banks, they prefer to credit money by using credit cards to purchase and pay it when they get salaries it makes them feel that their savings are secured with running life. The main factors that are responsible for credit card debts are the related knowledge about credit cards, low minimum payment requirements and credit card industry's aggressive progress and this all was showed by the findings based on a sample of 240 young credit card holders.

These findings to improve the performance of bank in relation to credit cards also provide awareness for both policy makers and bank management (S. S. Alam et al., 2014). In America, a significant share of the market for consumer financial products and services comprises the automobile financing market. For American consumers, the third-largest category of household debt is especially automobile lending. There is over one trillion dollars amount outstanding in case of auto loans behind student loans and mortgages. The largest purchase of the consumers that do not purchase a home may be the automobile. A significant part of the financial lives of consumers can consist of purchasing automobiles on loan. The features of the loan, issues related to a down payment and the source of financing are all factors affecting the decision-making in the case of auto financing (Black et al., 2010). According to Agarwal et al (2007), the non-financial assets that are most commonly held are automobiles. An increase in the supply of credit may increase demand for durable goods and thereby increase prices. On the other hand, any anticipated increase in collateral prices may drive an expansion in credit. (Garrett, 1995).

Many factors are considered during the provision of the personal loans in Pakistan, such as; age, income level, residence status as rental or owned. Through these factors, the person is assumed a defaulter or not, and the person's request is accepted or rejected based on these factors. Many other factors are also considered like Electronic Credit Information Bureau (ECIB) data check, where the customer's credit history and aggregate debt burden ratio are also assumed for the process of acceptance or rejection. To predict the decision (dependent variable), the residence status, credit history, years with the organization, and region are significant as stated by Azam, (2012).

Methodology

This research investigates empirically the relationship between credit risk and the performance of commercial banks in Pakistan. Return on Asset (ROA) and Return on Equity (ROE) are used as dependent variables (DV) to measure the profitability of commercial banks while infection ratios of Credit Cards (CC), Auto Loans (AL), Personal Loans (PL), and Consumer Durables (CD) are used as Independent Variables to measure credit risk. Liquidity Ratio (LR) and Capital Adequacy Ratio (CAR) are used as control variables. Simple Regression analysis is performed on time series data of all 30 commercial banks working in Pakistan, from the year 2004-2020 using SPSS.

A secondary source of data is used in this research. Data relevant to infection ratios of credit cards, auto loans, consumer durables, and other personal loans and data relevant to the performance of commercial banks i-e, Return on Assets (ROA) and Return on Equity (ROE), Capital Adequacy Ratio (CAR) and Liquidity Ratios of commercial banks is collected from Quarterly Performance Review of the Banking Sector (SPB, 2019b) and Quarterly Compendium: Banking Statistics (SPB, 2019a) published by State Bank of Pakistan which is available at the official website of SBP. Similarly, the data about Capital Adequacy Ratios and Liquidity Ratios is obtained from the SBP official website.

Research Model

In this study we have established two main models:

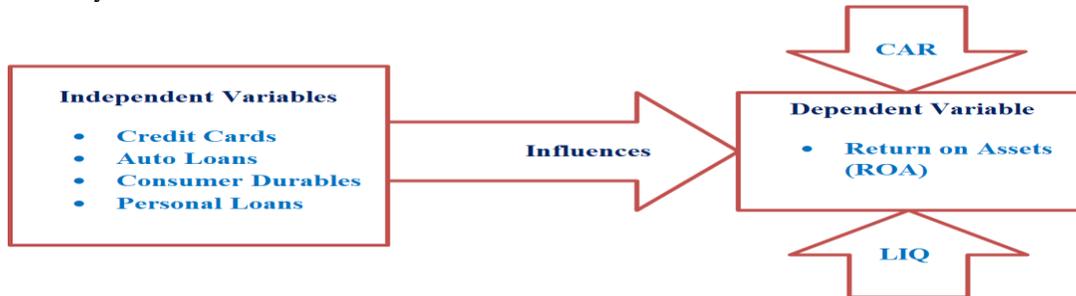


Figure 1: Research Model 1

$$ROA = \alpha + \beta_1 CC + \beta_2 AL + \beta_3 CD + \beta_4 PL + \beta_5 CAR + \beta_6 LIQ + \epsilon$$

Research Model 2

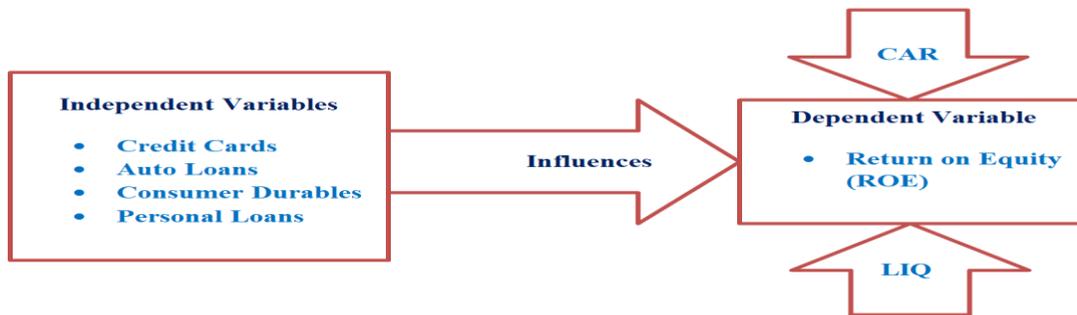


Figure 2: Research Model 2

$$ROE = \alpha + \beta_1 CC + \beta_2 AL + \beta_3 CD + \beta_4 PL + \beta_5 CAR + \beta_6 LIQ + \epsilon$$

Where:

ROA=	Percentage of Return on Assets after Tax of Commercial banks
ROE=	Return on Equity (Net Income/Total Equity) after Tax of Commercial banks
α=	Constant Parameter
β_1-β_6=	Coefficient of Independent variables
CC=	Credit card (Infection Ratios of NPL/Advances %)
AL=	Auto Loan (Infection Ratios of NPL/Advances %)
CD=	Consumer Durables (Infection Ratios of NPL/Advances %)
PL =	Other Personal Loans (Infection Ratios of NPL/Advances %)
CAR=	Capital adequacy ratio (Tier I /Risk Weighted Assets)
LIQ =	Liquidity Ratio (Current Assets/Total Assets)
ϵ =	Error Terms

Results

Firstly, the assumptions of Regression analysis are checked through SPSS and secondly, the research models to check the impact of credit risk (infection ratios of retail banking products) and performance of commercial banks in Pakistan are performed through SPSS which are given below.

Regression Test for Assumptions

Before performing the model test, the assumptions of linear regression analysis were checked and performed on SPSS. There are six main assumptions. Firstly, it is found that Residuals, independent, and dependent variables must be normally distributed. Secondly, a homoscedastic test is performed and from the results it is found that there is a pattern in the residuals values of variables, meaning that the variance was not found constant so to eliminate this problem log function is used, and hence our data is performed on bases of log values of variables instead of normal. Log values are useful if heteroscedasticity arises (Barodiya & Chauhan, 2015). Thirdly linearity of the dependent and independent variables is tested and met this assumption too. Fourthly multi-co linearity is measured by using the Variance Inflation Factor (VIF) in the above model which has an expected value between 0-10. It is found all variables have a small value of VIF which is ignorable. Finally, Normality distribution was tested and it was found that Residuals, independent, and dependent variables were normally distributed. From the results of SPSS, a normal distribution of data can be verified from the resulted P-P plot. It was found that a diagonal line and a bunch of little circles had come out from the test. Ideally, this plot is a confirmation of the normality of the data.

Research Models and Results

The credit risk management of commercial banks, especially credit risk management on the bases is the foundation of this research. This is the main reason to take interest in the investigation of the relationship between profitability and risk management. Based on NPL (Non-Performing Loans) of consumer banking products and profitability to find the relationship between the credit risk management is the specific purpose of this research. To disclose the relationship in a statistical and objective method, there is a need to quantify credit risk management as well as profitability. For achieving this purpose, we selected the four retail banking products to study the relationship among Non-Performing Loans to measure credit risk management, and two indicators ROA and ROE are chosen to represent profitability. Control variables have been used too in this research CAR and Liquidity. As there has been much research in the past to prove that CAR and Liquidity have a direct impact on profitability so these variables could not be ignored while performing this research. In our study, the theoretical framework used can be illustrated from the below model:

Research Model

Table 1: Model 1 Summary
Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.663 ^a	.439	.384	.21148	.919

a. Predictors: (Constant), LNLIQ, LNAL, LNCAR, LNCD, LNCC, LNPL

b. Dependent Variable: LNROA

From the model summary, it can be seen that the overall model fits as there is a relationship according to the above table it can be seen that the R Square value is 43.9 % and the Adjusted R Square 38.4%. It means 43.9 % variations in the performance of banks (ROA) can be explained by the NPL of Retail banking products. Hence there is a significant relationship exists in this model.

Table 2: Moel 1 ANOVA^a
ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.138	6	.356	7.969	.000 ^b
	Residual	2.728	61	.045		
	Total	4.867	67			

a. Dependent Variable: LNROA

b. Predictors: (Constant), LNLIQ, LNAU, LNCAR, LNCD, LNCC, LNPL

According to the ANOVA table, the significant level is 00%. It means that the hypothesis about the Credit risk (NPL of retail banking products) has a significant impact on the performance (ROA) of commercial banks in Pakistan.

Table 3: Model 1 Coefficients
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-2.947	.845		-3.486	.001		
LNCC	-.324	.066	-1.066	-4.903	.000	.194	5.145
LNAL	.307	.071	1.008	4.307	.000	.168	5.958
LNCD	.032	.047	.093	.668	.506	.475	2.106
LNPL	-.206	.081	-.635	-2.538	.014	.147	6.804
LNCAR	1.525	.362	.696	4.208	.000	.336	2.978
LNLIQ	-.073	.119	-.081	-.614	.541	.527	1.896

a. Dependent Variable: LNROA

To further investigate the significant impact of NPL of individual retail banking products on the performance of commercial banks the above-mentioned table is used. According to this table, all independent variables show good Beta values which show their relation with performance like CC has -32.4 % with a significant level of 00 % (lower than 5 % Acceptable). AL has 30.7 % with significant level 00 % (lower than 5 % acceptable). CD has 3.2 % with a significant level of 50 % (higher than 5 % is not acceptable). PL has 20.6 % with significant level 1.40 % (lower than 5 % Acceptable) CAR has 152 % with significant level 00 % (lower than 5 % Acceptable). LIQ has -7.3 % with a significant level of 54.1% (higher than 5 % is not acceptable). It can be seen that only CD and LIQ are not significant but the rest of all variables show a significant impact on ROA. Their VIF values are lower than 10 which shows no significant multicollinearity between variables found.

Table 4: Model 1 Residuals Statistics^a
Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-.0558	.7382	.3086	.17865	68
Residual	-.45464	.43597	.00000	.20179	68
Std. Predicted Value	-2.039	2.405	.000	1.000	68
Std. Residual	-2.150	2.061	.000	.954	68

a. Dependent Variable: LNROA

This table shows that overall 68 observations of each variable are performed and the standard deviation of independent variables is .17865 and residual .20179 and the mean of independent variables is .3086 with a maximum value of .7382 and minimum value of -.0558

Research Model 2

Table 5: Model 2 Summary
Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.760 ^a	.577	.536	.17326	.841

a. Predictors: (Constant), LNLIQ, LNAL, LNCAR, LNCD, LNCC, LNPL

b. Dependent Variable: LNROE

From the model summary, it can be seen that the overall model fits as there is a significant relationship between dependent and independent variables. According to the above data, it is found that the R Square value is 57.7% and the Adjusted R Square 53.6%. It means 57.7 % variations in the performance of banks (ROE) can be explained by the NPL of Retail banking products. Hence there is a significant relationship exists in this model.

Table 6: Model 2 ANOVA^a
ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.501	6	.417	13.888	.000 ^b
	Residual	1.831	61	.030		
	Total	4.332	67			

a. Dependent Variable: LNROE

b. Predictors: (Constant), LNLIQ, LNAL, LNCAR, LNCD, LNCC, LNPL

According to the ANOVA table, there is an overall 57.7 % of the dependent variable explained by NPL of consumer banking, and the significant level is 00%. It means that the hypothesis about the Credit risk (NPL of retail banking products) has a significant impact on the performance (ROA) of commercial banks in Pakistan.

Table 7: Model 2 Coefficients^a
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.037	.693		2.942	.005		
LNCC	-.222	.054	-.772	-4.090	.000	.194	5.145
LNAL	.084	.058	.294	1.446	.153	.168	5.958
LNCD	.121	.039	.378	3.131	.003	.475	2.106
LNPL	-.153	.066	-.501	-2.309	.024	.147	6.804
LNCAR	.211	.297	.102	.712	.479	.336	2.978
LNLIQ	.105	.097	.123	1.077	.286	.527	1.896

a. Dependent Variable: LNROE

To further investigate the significant impact of NPL of individual retail banking products on the performance of commercial banks the following table is used. According to this table, all independent variables show good Beta values which show their relation with performance like CC has -22.2 % with a significant level of 00 % (lower than 5 % Acceptable). AL has 8.4 % with a significant level of 15.3 % (Higher than 5 % is not acceptable). CD has 12.1 % with a significant level of 3 % (Lower than 5 % is not acceptable). PL has -15.3 % with significant level 2.40 % (lower than 5 % Acceptable). CAR has 21.1 % with a significant level of 47.9 % (Higher than 5 % Not Acceptable). LIQ has -10.5 % with significant level 28.6 % (Higher than 5 % not Acceptable). It can be seen that only AL, CAR, and LIQ are not significant but the rest of all variables show a significant impact on ROE. Their VIF values are lower than 10 which shows no significant multicollinearity between variables found.

Table 8: Model 2 Residuals Statistics
Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.3745	3.2826	2.7117	.19322	68
Residual	-.36347	.40687	.00000	.16532	68
Std. Predicted Value	-1.746	2.955	.000	1.000	68
Std. Residual	-2.098	2.348	.000	.954	68

a. Dependent Variable: LNROE

This table shows that overall 68 observations of each variable are performed and the standard deviation of independent variables is .19322 and residual .16532 and the mean of independent variables is 2.7117 with a maximum value of 3.2826 and minimum value of 2.3745.

Conclusions and Recommendations

The main purpose of the research is to analyze the impact of credit risk (infection ratio of retail banking products) on the profitability of the commercial banks of Pakistan. Return of Asset (ROA) and Return on Equity (ROE) are used as dependent variables (DV) to measure profitability of commercial banks while infection ratios of Credit Card (CC), Auto Loan (AL), Personal Loan (PL) and Consumer Durables (CD) are used as Independent Variables to measure credit risk. Liquidity Ratio (LR) and Capital Adequacy Ratio (CAR) are used as control variables. Two main models are used in this study to test the hypothesis. In first model regression analysis is performed keeping infection ratios of Credit Card (CC), Auto Loan (AL), Personal Loan (PL) and Consumer Durables (CD) as Independent Variables (IV) to measure credit risk while Liquidity Ratio (LR) and Capital Adequacy Ratio (CAR) are used as control variables. Return on Asset (ROA) is used as dependent variable (DV) in first model while Return on Equity (ROE) is used as dependent variable (DV) keeping other independent and control variables same. Compiled time series data of all 30 commercial banks working in Pakistan, from year 2004-2020, is taken from "Quarterly Compendium: Statistics of the Banking System" and "Quarterly Performance Review of the Banking Sector" available at official website of State Bank of Pakistan (SBP). Simple Regression analysis is performed on data using SPSS. Results of this study show there is a significant relationship between the Credit Risk (infection ratio of NPL of retail banking products) and profitability of banks (ROE and ROA of commercial banks in Pakistan). Results show all independent variables such as Credit Card (CC), Auto Loan (AL), and Personal Loan (PL) except Consumer Durables (CD) have a significant impact on the Return on Assets (ROA) of commercial banks. While all independent variables, Credit Card (CC), Personal Loan (PL), and Consumer Durables (CD) except Auto Loan (AL) also have a significant impact on the Return on Equity (ROE) of commercial banks. Overall results of this study show there is negative impact of credit risk of retail banking products on the profitability of commercial banks. This study is helpful for policy maker in understanding the contribution of retail banking products to the overall credit risk of commercial banks and they will be able to manage their credit risk more effectively by devising various policies regarding the credit risk related to retail banking products. In Pakistan, the performance of banks

and the credit risk are associated with each and we found it through results. The performance of banks is affected by credit risk. So, for the higher profitability of the commercial banks, there is needed to be suitable credit risk management. There are some recommendations for the commercial banks in our search. The bank managers need to have proper attention to the credit risk management, especially the non-performing loans of the retail banking products are needed to be controlled effectively by using authentic techniques and proper evaluation methods. This study is helpful to the banks in Pakistan to understand the contribution of retail banking products in the overall credit risk of these banks and they will be able to manage their credit risk more effectively by devising various policies regarding the credit risk related to retail banking products.

This research provides bank managers and investors further understanding by testing how the measures of profitability are affected by the measures of credit risk. This research provides valuable information to various stakeholders of banks such as bank managers, financial analysts, investors, and supervisors, regulators, policy makers and depositors of commercial banks. Overall results of this study show there is negative impact of credit risk of retail banking products on the profitability of commercial banks. Since there is a negative relationship between non-performing loan ratios and profitability indicators, policy makers such as government bodies might have the requirements to strengthen the non-performing loans to help banks to operate more efficiently. This study is helpful for policy maker in understanding the contribution of retail banking products to the overall credit risk of commercial banks and they will be able to manage their credit risk more effectively by devising various policies regarding the credit risk related to retail banking products. Bank managers will be able to closely monitor retail banking product and use risk mitigation techniques while advancing loans to their customers. We recommend commercial banks to focus on the impacts of credit risk, considering NPL of retail banking products, on the profitability of banks. They are further advised to make more efforts in adjusting the loan policies and recovering loans. Keeping in view of the results of this study we can recommend that banks should focus on their retail banking products more closely and effectively as Credit risk is the key element for performance so banks should take steps to minimize the Non-Performing Loans (NPLs) of consumer banking products and the recovery system of retail loans should be improved.

References

- Abbas, A., Zaidi, S. A. H., Ahmad, W., & Ashraf, R. (2014). *Credit Risk Exposure and Performance of Banking Sector of Pakistan*. 6.
- Agarwal, S., Ambrose, B. W., & Chomsisengphet, S. (2007). Asymmetric Information and the Automobile Loan Market. In S. Agarwal & B. W. Ambrose (Eds.), *Household Credit Usage* (pp. 93–116). Palgrave Macmillan US. https://doi.org/10.1057/9780230608917_6
- Ahmed, S. F., & Malik, Q. A. (2015). *Credit Risk Management and Loan Performance: Empirical Investigation of Micro Finance Banks of Pakistan*. 5(2), 6.
- Akhtar, M. F., Ali, K., & Sadaqat, S. (2011). *Factors Influencing the Profitability of Conventional Banks of Pakistan*. 66, 8.
- Alam, S. S., Rahim, R. A., Haq, R., & Khan, A. R. (2014). *WHAT INFLUENCE CREDIT CARD DEBTS IN YOUNG CONSUMERS IN MALAYSIA*. 6, 11.
- Appannan, S., Doraisamy, B., & Hui, T. X. (2013). *Customer Perception On Service Quality Of Commercial Banks: A Case Study In Penang, Malaysia*. 4(5), 10.
- Azam, R. (2012). *The significance of socioeconomic factors on personal loan decision (a study of consumer banking local private banks in Pakistan)*. 11.
- Barodiya, P., & Chauhan, A. S. (2015). *Impact of Retail Banking in Indian Economy*. 6, 5.
- Bizuayehu, M. (2015). *The Impact of Credit Risk on Financial Performance of Banks in Ethiopia*. 84.
- Black, L. K., Hancock, D., & Passmore, S. W. (2010). The Bank Lending Channel of Monetary Policy and its Effect on Mortgage Lending. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1895500>

- Elbarouki, S. (2016). *Executive Banking Leaders and Risk-Management Strategies on Subprime Mortgage Lending*. 112.
- Garrett, B. (1995). *John V. Duea Research Department Federal Reserve Bank of Dallas P.O.Box 655905 Dallas, TX 75265*. 41.
- Melzer, B. T., & Morgan, D. P. (2015). Competition in a consumer loan market: Payday loans and overdraft credit. *Journal of Financial Intermediation*, 24(1), 25–44. <https://doi.org/10.1016/j.jfi.2014.07.001>
- Noman, A. H., Pervin, S., & Chowdhury, M. M. (2015). *The Effect of Credit Risk on the Banking Profitability: A Case on Bangladesh*. 9.
- Onuonga, S. M. (2014). *The Analysis of Profitability of Kenya`s Top Six Commercial Banks: Internal Factor Analysis*. 3(5), 10.
- Raashid, M., Rasool, S. A., & Raja, M. U. (2015). Investigation of Profitability of Banking Sector: Empirical Evidence from Pakistan. *Journal of Finance and Bank Management*, 3(1). <https://doi.org/10.15640/jfbm.v3n1a13>
- Schreiner, M., Cortes-Fontcuberta, M., Graham, D. H., Coetzee, G., & Vink, N. (1996). Discrimination in hire-purchase lending by retailers of consumer durables in apartheid South Africa. *Development Southern Africa*, 13(6), 847–860. <https://doi.org/10.1080/03768359608439938>
- SPB, P. (2019a, August 1). *Financial Soundness Indicators and Quarterly Compendium of the Banking System*. SBP. <http://www.sbp.org.pk/ecodata/fsi.asp>
- SPB, P. (2019b, August 1). *Quarterly Performance Review of the Banking Sector By State Bank of Pakistan* [GOVERNMENT]. SBP. <http://www.sbp.org.pk/ecodata/fsi.asp>
- Staikouras, C. K., & Wood, G. E. (2011). The Determinants of European Bank Profitability. *International Business & Economics Research Journal (IBER)*, 3(6). <https://doi.org/10.19030/iber.v3i6.3699>

