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Determinants Of Bank Profitability In Pakistan

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Abstract
Banks play an important role in any economy. They are considered as backbone of any country's financial system. The Sound financial system provides a useful platform for all stakeholders to play their role in the economic system of a country. Keeping in mind the importance of the financial system, the main aim of the current study is to determine bank-specific factors that affect the bank's profitability operating in Pakistan. The current study examines the association and relationship between macro-economic, bank-specific determinants and Bank's profitability by the way of Data of Pakistani banks. In this study, we use profitability as a dependent variable, whereas size, productivity growth, capital, credit risk and operating expense management as independent variables. The study uses the secondary source of data and uses it to determine performance indicators of 24 private and public sector banks of Pakistan ranging from 2013 to 2023. The list of banks includes almost all different banks operating in Pakistan. The data are obtained from financial statements, Annual reports, balance sheets of the banks and from Statistical Bulletin of the State Bank of Pakistan. Panel data regression analysis is used to find the association and a significant effect of performance indicators on profitability. The correlation tests are applied to check the degree of association among the variables. . The descriptive statistics and frequency distribution are applied to calculate the mean and standard deviation of the variables. According to the results of the current study, productivity growth is found to be statistically positive and significant, Capital to be statistically negative and insignificant, credit risk to be statistically positive and significant, Operating expense management is found to be statistically negative but significant and size is found to be statistically negative and insignificant. The results of the study would be useful for policymakers of the banks and various other stakeholders.

Keywords:*Profitability, Banks, Financial system, Pakistan.*

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I. Introduction

The banking sector is considered lifeblood in the modern world of trade to supply them with a vital resource of funds. This rising process of globalization completes the idea of effectiveness extra important for both financial and non-financial institutions and banks. Banks rely on competitive marketing procedures that complete their success and development. The methods of banking system have changed a lot in the modern era compared to the previous era (Hussain & Bhatti, 2010).

During the previous two decades, banking area of Pakistan has seen important development from an administration and strictly observed to a dynamic, competitive banking sector. Right now Pakistani banking division contains private banks, public banks, (DFI's) improvement back organizations, foreign banks, and Islamic banks. This progression is the final result of persistent privatization of the government banks the start of 1990s entrance of private, commercial, foreign, and Islamic banks in the banking system and step-by-step implementation of rules and procedures supervised by The State Bank of Pakistan (SBP) in line according to the international standards. All of above factors increase the competition in banking sector of Pakistan. This competition is consistent for the business individuals to struggle for best practices and current innovation to enhance their productivity and to build consumer satisfaction. All above elements are used to increase and expand business and to gain greater rate of profitability.

State Bank of Pakistan is generally considered as a governing body of whole banking sector of Pakistan. Pakistani banking sector consists of banking and non-banking financial institutions. Generally banking sector consists of commercial banks, which might be further divided into foreign and domestic banks. Domestic banks are additionally divided into private sector and public sector commercial banks.

Commercial banks of today's world are broader than ever. We can find a wonderful variety of opportunities in commercial banking, like the initial at the branch level where you may start as a teller to various services such as leasing, international finance, credit card banking, and trade credit. Public banks are those institutions which are regulated by the government and public bank are those in which there are several partners or shareholders, and they choose from their own body a certain number, who are involved with its management. 4 public banks are working in Pakistan. Limited banks that are limited by regulation offer only certain services to the public. Limited-service banks have thin and narrow product lines, such as auto loans, credit cards and may offer different services on different and irregular basis.

To have a present review of the part, as indicated by The State Bank of Pakistan information (2009-2013) assets of the banking sector division extended in 2013. Total assets of banks were increased about Rs.9.9 trillion in 2012 as compared to Rs.10.7 trillion (about 107 billion USD) in 2013, demonstrating an expansion of 7.8 percent during the most recent year. This demonstrates the consistent development and future forecast of the banking sector in Pakistan. Since there is an expansive bit of the public that is not using assistance and using the benefits of banking system. The banking sector perform a key role in the growth of any economy of a country. Some important developments have been seen in Pakistani banking sector in the last 62 years. Initially, it experiences absence of capital and uncertainty because of built-up political and financial disaster. Coming about modifications were made to total the control and limit of SBP from next to the State Bank of Pakistan Act 1956, which pushed the private part to create cash-related establishments and banks. What's more privatization improvements of saving money segment that start in 1992 incited neighborhood speculators and influenced outside banks (Ahmad and Humayoun, 2010). In the interim, The State Bank of Pakistan (SBP) was distanced into 3 major sections in 2001.

The objectives of the study are:
1)To examine the association between size and profitability of banks.
2)To examine the association between productivity and profitability of banks.
3)To examine the association between capital and profitability of banks.
4)To examine the association between credit risk and profitability of banks.
5)To examine the association between operating expense management and profitability of banks

The prime aim of this research is to test the relationship between bank-specific indicators and external macroeconomic indicators on bank’s profitability. The literature on bank profitability determinants is rare so the current study adds this literature by focusing on determining the profitability determinants of Pakistani banks. The study area includes 24 Commercial Banks of Pakistan and data is ranging from 2013-2023.

The rest of the paper is sorted as below: There is introduction of study given in Section 1, related work is completed in Section 2.Brief data and Methodology is clarified in Section 3. Data analysis and results appeared in Section 4.In Last segment conclusion and recommendations are explained.

II. Literature Review

The components of bank profitability are divided into internal and external segments. A couple of surveys were country-specific and some researched pool of countries for examining the profitability determinants. However, these reviews recommend that the profitability determinants for banks are isolated into two major categories that are external and internal elements. Bank profitability is taken into consideration of micro and macro-determinants. The internal components are said to be micro or bank-specific determinants. The external variables are not directly linked to the bank administration but put effect on profitability. The studies determine that developing banks are individuals who have pushed to show signs of improvement client and capital productivity, individuals who have adjusted high deposit accounts compared to their assets lastly, the individuals who have able the capacity to build up their equity for banks execution and performance.

This study examines variables including size, productivity growth, capital, operating expense management, and credit risk.

Size is the vital variable of bank’s profitability. Size is measured by different methods as found in the literature. Such as entire assets, entire deposits and loans. A huge bank measured either by total assets, total deposits, or total loans may additionally either enjoy economies or diseconomies of scale.

Athanasoglou et al. (2008) establish a positive association of the size of banks and observe that the size of bank relies upon the economies of scale due to fact that huge size banks have been extra money-making than smaller size banks.

Pilloff and Rhoades (2002) talk about the direct and positive association of size and profitability of banks.
Thus, it is hypothesized:

H1: Size has a positive association with profitability.

Bank productivity has turned out as an idea that has more than one dimension, which has been talked about in the study. The efficiency of bank and the system being trailed by them are, for the most part, considered in the data united in their annual reports.

The productivity growths of economy are positively correlated with profitability and guarantee the observed evidence (Alexiou & Sofoklis, 2009).

In recent world banks face strong competition with each other due to low barriers to enter the global banking industry. Which force them to reorganize To gain the overall output and efficiency of banks they use steady labor force to target high level of productivity growth. We use labor productivity change by total gross revenue on total quantity of workers (Athanasoglou et al., 2008). Productivity is measured through return on assets.

H2: Productivity has a positive association with profitability.

Generally, the organizations arrange cash from two important sources inside source and outside source. At the point when an organization pullback the portion of its earnings that is inside factor and when the firm enhance cash by the issuance of debt or equity are outside resources. So the capital structure is considered as a source by which any organization finance itself by equity or debt, as this is the significant segment of organization since it figures out what return stays for stockholders in the wake of paying the debt holders. The organization ought to dependably endeavor that mix of obligation and value (i.e. capital structure), which is advantageous to all partners of the organization, particularly shareholders (Rattray, 2012).

When we use ROA as a profitability measure we use ratio of equity to assets (EA). There is estimated to be positive association of capital over profitability because of truth that capital is the number of own funds which are available for the support of business (Athanasoglou et al 2008).

Ali, et al 2011 using regression analysis and correlation descriptive to research the effect of bank-specific and macroeconomic components on Pakistani banking ranging from the year 2006-2009. They examined capital has a negative impact.

Thus, it is hypothesized:

H3: Capital has a positive association with profitability.

Credit risk incorporates the danger of loss because of default by borrower of an advance or both the principal and, amount of interest, quantity of bad obligations issue advances and, allowance for credit losses (Campbell, 2007).

Gyamerah and Amoah (2015) determined the profitability determinants of foreign and local banks in Ghana by macroeconomic and bank-specific indicators. The study indicates that credit risk has a direct and positive association with profitability, while there is a negative association between cost management and profitability.

Ali et al. (2011) using regression, correlation, and descriptive analysis to research the effect of bank-specific and macroeconomic components on Pakistani banks and data ranges from 2006-2009. They examined credit risk has a negative impact on profitability.

Thus, it is hypothesized:

H4: Credit risk has a negative association with profitability.

The cost of banks is divided into two major parts such as operating cost and further expenses (depreciation taxes and are included).In above literature-operating expenses are considered as the effect of bank management. The ratio among these expenses is expected to negatively associate with profitability. This predicted negatively associated in Greek case, however staff expenditures are affected by comparatively low productivity and the surplus capability of the huge publicly-owned banks (Athanasoglou, et al 2008).

There is huge space in the profitability of banking sector of Pakistani nobody till today has researched the impact of determinants to be specific operating expenses and nonprofit loans on profitability. As specified Andreas and Gabrielle (2010) researched two factors in the situation of Switzerland. Also, there is no review and studies that have used the most recent financial information of every single bank of Pakistan until 2016 to give updated proof on components affecting profitability of banking sector of Pakistan. In the literature, we suppose a negative association with operating expenses and overall performance of the possible losses from bad quality loans (Mansur & Zitz, 1993).

Thus, it is hypothesized:

H5: Operating expense management has a negative association with profitability.

As in literature the bank profitability can be calculated by ROA, ROE of banks, and other different financial ratios. Profitability in the studies. Additionally, the logic behind selecting ROA over ROE is since financing was prepared by Islamic banks since its deposits in reference to capital. For that reason, ROA is a better choice than ROE.

The literature explains the determinants of profitability on the Greek banks are sparse. Eichengreen and Gibson (2001) studied the profitability determinants of banks from 1993 to 1998. Their study indicates few attempts to decide profit determination in banking, however outcomes proposing that the Greek banks are imperfective competitive. Market-specific factors such as concentration ratio and market share have a positive but insignificant effect on profitability.

As in literature bank profitability is calculated by ROE, ROA of banks, and further financial ratios. Tumin et al., (2011) and Azhar et al. (2003) used only ROA as profitability's proxy in their studies. So, ROA is superior option then ROE.

ROA can be calculated by bank's profit to its total assets.
Profitability= N.P before taxes/Assets or Equity.

According to the purpose and nature of all studies specified in the literature review, a number of explanatory variables have been anticipated for this research is external and internal determinants of bank's profitability. We take the log of total assets (SIZE), Rate of change in inflation-adjusted gross total revenue/personnel's (PRODUCTIVITY GROWTH), Equity/Assets (CAPITAL, loan loss provision to total loans (CREDIT RISK), Operating expenses / Assets (OPERATING EXPENSE MANAGEMENT), Net profit before taxes / total assets (ROA), Net profit before taxes / Equity (ROE).

III. Methodology

Methodology overview

The study uses the secondary source of data to determine performance indicators of 24 private and public sector commercial banks of Pakistan, ranging from the year of 2013 to 2023. The list of banks includes almost different banks working in Pakistan. Data are gathered from financial statements, Annual reports, balance sheets of the banks, and furthermore from

Statistical Bulletin of the State Bank of Pakistan. This review will use E-Views 9 for analysis and data manipulation. Regression analysis is used to find the association and the significant impact of performance indicators of profitability. The correlation tests used to manage the issues of multicollinearity and autocorrelation, respectively. The descriptive statistics and frequency distribution used to find the mean and standard deviation of the variable used to derive the impacts of variable.

The following are the primary variables of the study
- Profitability
- Size
- Productivity
- Capital
- Credit risk
- Operating expense management.

Model specifications

In this study, multiple regressions are used to analyze the effect of each variable on the dependent variable. The regression equation is
Profitability = $\beta 0 + \beta 1$ (SZ) + $\beta 2$ (PG) + $\beta 3$ (CL) + $\beta 4$ (CR) + $\beta 5$ (OEX) + μ.

The above equation shows the association among the dependent variable performances as calculated by the Return on Assets (ROA) the independent variables include (size, productivity growth, capital, credit risk, and operating expense management.).

Model Framework

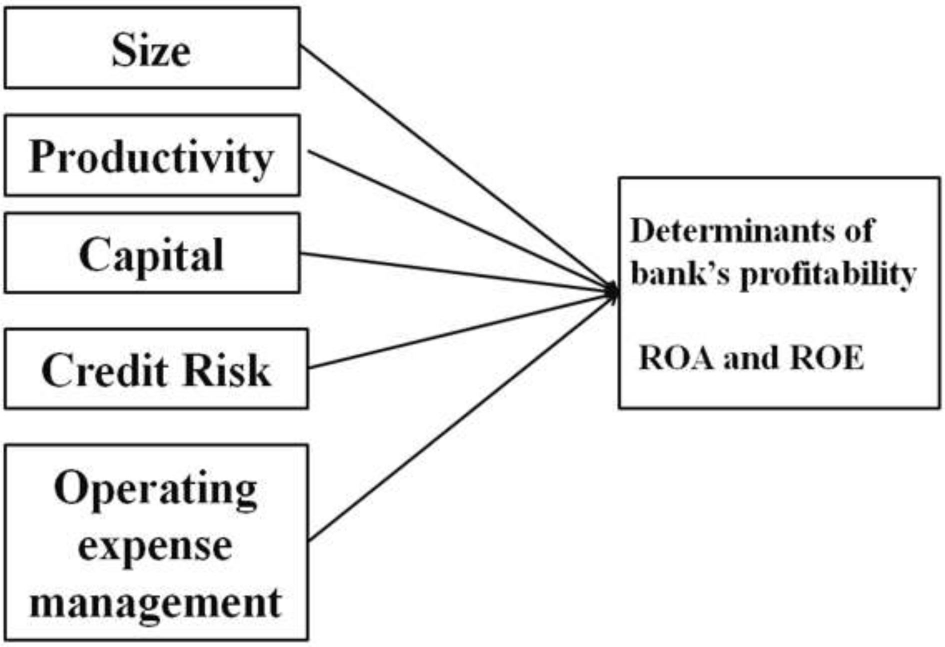

Table 1. Variables with their Proxies and Abbreviations:

Symbol	Variables	Proxies	Expected Relation (+/-)
β0	Value of the Intercept		
ROA	ROA (Return on Asset)	Net-Profit before tax/Total Assets	
Banks Specific Factors:			
SZ	Size	Log of total assets	+
PG	Productivity growth	Rate of change in inflation-Adjusted gross total revenue/personnel	+
CL	Capital	Equity/Assets	+
CR	Credit Risk	Loan loss provision/Total loans	_
OEX	Operating expense management	Operating expenses/Assets	_

In the above study, we have taken the log of total assets to calculate the proxy of SIZE. And take SZ as a symbol of size. The rate of change in inflation-adjusted gross total revenue/ personnel's to calculate proxy of PRODUCTIVITY GROWTH. And take PG as a symbol of productivity growth. Equity/Assets to calculate the proxy of CAPITAL. Furthermore, take CL as a symbol of capital. The loan loss provision divided by total loans to find the proxy of CREDIT RISK. Additionally, take CR as a symbol of credit risk. Operating expenses / Assets to find the proxy of OPERATING EXPENSE MANAGEMENT. Additionally, take OEX as a symbol of operating expense management. Net profit before taxes/total assets to calculate the proxy of Return on Assets. Furthermore, take ROA as a symbol of return on assets.

IV. Data Analysis AndResults

The following are the results of this study. Data of this study are obtained from almost 24 private and public commercial banks of Pakistan ranging from 2013 to 2023.

Table 2: Descriptive Statistics

	SIZE	PG	CL	CR	OEX
Maximum	3.95E+09	11503.21	66.54	1.64	27.96
Minimum	1093367.	-2667.65	0.66	-0.06	0.74
Std. Dev.	5.22E+08	1963.36	11.39	0.22	2.99

In current study data of 24 banks ranging from 2013-2023 are taken. The descriptive statistics indicate the values for mean, maximum, minimum and standard deviation for all variables of the study. In the table above the size has an average of about 1.20E+08. The maximum value of size is 3.93E+09 and the minimum value is 1093367. Productivity growth has average of 2210.30. The maximum value of productivity growth is 11503.21 and the minimum value is -1963.36. Capital has average of 8.78. The maximum value of capital is 66.554 and the minimum value is 0.66. Credit risk has an average of 0.05. The maximum value of credit risk is 1.64 and the minimum value is -0.66. Operating expense management has an average of 3.39. The maximum value of operating expense management is 27.96 and the minimum value is 0.74.

Table 3: Pearson Correlation Coefficients

Variables	ROA	PG	CL	CR	OEX	SIZE
ROA	1					
PG	.309***	1				
CL	-.293***	-.159**	1			
CR	.040	-.066	-.116	1		
OEX	.016	-.240***	.346***	-.077	1	
SIZE	.456***	.290***	-.135**	.043	.305***	1

In the above table correlation coefficients demonstrate that all variables correlated with other variables. Above table also demonstrate that the connection between independent variable is not well, so the issue of multi co-linearity is absent.

The table indicates a direct relationship between return on assets and productivity growth which testifies that both the variables are positively significant with each other. The relation between capital and ROA is negatively correlated and significant. The relationship between capital and productivity growth is negatively correlated and significant. The relationship between credit risk and ROA is positively correlated and insignificant. The relation between credit risk and productivity growth is negatively correlated and insignificant. The relation between credit risk and capital is negatively correlated and insignificant. The relation between operating expense management and ROA is positively correlated and insignificant. The relation between operating expense management and productivity growth is negatively correlated and significant. The relation between operating expense management and capital is positively correlated and significant.

The relation between operating expense management and credit risk is negatively correlated and insignificant. Size has positive and significant effect on ROA. Size has positive and significant effect on productivity growth. Size has negative and significant effect on capital.

Size has positive impact on credit risk. Size has positive and significant effect on operating expense management.

Table 4:Correlated Random Effects– Haussman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq.d.f.	Prob.
Cross-section random	20.454	5	.001

In the above table the value of Chi-Sq st 20.454 and its probability is 0.001, which indicates that the model is good and show reality and fixed-effect model shall be used.

Table 5: Pooled Least Square and Fixed Effect Model

Variable	B	Std. Error	t-Statistic	Prob.
PG	7.20E-06	1.46E-06	4.934770	0.0000
CL	-0.000210	0.000329	-0.637152	0.5248
CR	0.005835	0.002952	1.976286	0.0496
OEX	-0.003442	0.001339	-2.570420	0.0109
SIZE	-0.005050	0.002717	-1.858551	0.0647
C	0.094113	0.044392	2.120068	0.0353
Diagnostics				
	R Square	0.754019		
	Adj R squared	0.717188		
	F statistic	20.47224		
	Probability(F test)	0.00000		

Table reveals that independent variables i.e., productivity growth to be statistically positive and significant as in accordance with the result of (Alexiou & Sofoklis, 2009). ($p<.001$) to the dependent variable i.e. return on assets. In this study, the assumed hypothesis is productivity growth has a positive association with profitability; therefore, the hypothesis of the current study is accepted and the table also reveals that independent variables i.e. credit risk to be statistically positive and significant as in accordance with the result of Gyamerah& Amoah (2015) to the dependent variable i.e. return on assets. The assumed hypothesis is credit risk has a negative association with profitability; therefore, hypothesis of the current study is rejected and Negative effect of capital is in accordance with the result of Naceur (2003). The assumed hypothesis of the current study is capital has positive association with profitability, therefore, this hypothesis is also rejected, Efficient administration leads bringing down of operating expenses which in turns enhance the profitability of firm. In the above study operating expenses management put negative and significant effect on profitability of banks as in accordance with the result of (Athanasoglou, et al. 2008) therefore the hypothesis of the current study is accepted. The bank size is a vital determinant of profitability. It can impact the bank operations internally in any case. The positive impact of bank size with ROA shows that the bank has possessed the capacity to accomplish economies of scale, which diminishes the expenses of operation and hence it is easy to gain profitability. A negative connection between size and profitability results diseconomies of scale (Chirwa, 2003; Kosmidou, 2008) and size as in accordance with the result of Athanasoglou et al. (2008) are recorded along with statistical insignificant. Thus, according to results of current study size have negative impact which indicates diseconomies of scales In current study, the assumed hypothesis is size has a positive association with profitability therefore the hypothesis of current study is rejected. The default value for significance level is 0.05. In this case where the probability is above 0.05 then the hypothesis will be rejected and if lower, will be acceptable.

The results acquired from the above table are found mostly insignificant and show overall model fitness is good ($F= 20.47$, $p<.05$) and all the independent variables of the study appear to have explained around 75.4% variance. The value of R^2, which is .754 indicates that the model is effective. R-value signifies the correlation coefficient between size, capital, credit risk, profitability growth, operating expense management, and return on assets. The adjusted R^2 value, which is 71.7 % shows that the adjustment of R^2 indicates the reality.

Table 8:Panel Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PG	2.50E-06	9.45E-07	2.648299	0.0087
CL	-0.000551	0.000160	-3.443716	0.0007
CR	0.001463	0.007358	0.198809	0.8426
OEX	0.000235	0.000675	0.347787	0.7283

SIZE	0.006947	0.001309	5.306666	0.0000
C	-0.108568	0.020985	-5.173590	0.0000
Diagnostics				
	R Square	0.287604		
	Adj R squared	0.270642		
	F statistic	16.95599		
	Probability(F test)	0.000000		

The above table reveals that independent variables i.e. productivity growth capital, and size to be statistically significant ($p<.001$) to the dependent variable i.e. return on assets. Credit risk and operating expense management recorded along with statistical insignificance. The default value for significance level is 0.05. In this case where the probability is above 0.05 then the hypothesis will be rejected and if lower, will be acceptable.

According to the table above, the results acquired from multiple linear regression analysis the model is found mostly insignificant ($F= 16.955$, $p<.05$) and all the independent variables of the study appear to have explained around 28.7% variance. The value of R^2 which is .287 indicates that the model is effective. R-value signifies the correlation coefficient between size, capital, credit risk, profitability growth, operating expense management, and return on assets. The adjusted R^2 value that is 27% shows that the adjustment of R^2 indicates the reality.

V. Discussion

The current study reveals that independent variables i.e. productivity growth to be statistically positive and significant as in accordance with the result of (Alexiou & Sofoklis, 2009). ($p<.001$) to the dependent variable i.e. return on assets. In this study, the assumed hypothesis is productivity growth has a positive association with profitability; therefore, the hypothesis of the current study is accepted and the table also reveals that independent variables i.e. credit risk to be statistically positive and significant as in accordance with the result of Gyamerah& Amoah (2015) to the dependent variable i.e. return o3n assets. The assumed hypothesis is credit risk has a negative association with profitability; therefore, the hypothesis of the current study is rejected and the negative effect of capital is in accordance with the result of Naceur (2003). The assumed hypothesis of the current study is capital has a positive association with profitability, therefore, this hypothesis is also rejected, Efficient administration leads to bringing down operating expenses which in turn enhances the profitability of a firm. In the above study operating expenses management put a negative and significant effect on the profitability of banks as in accordance with the result of (Athanasoglou, et al. 2008) therefore the hypothesis of current study is accepted. The bank size is a vital determinant of profitability. It can impact the bank operations internally in any case. The positive impact of bank size with ROA shows that the bank has possessed the capacity to accomplish economies of scale, which diminishes the expenses of operation and hence it is easy to gain profitability. A negative connection between size and profitability results diseconomies of scale (Chirwa, 2003; Kosmidou, 2008) and size as in accordance with the result of Athanasoglou et al. (2008) are recorded along with statistical insignificant. Thus, according to the results of the current study size have a negative impact which indicates diseconomies of scale In the current study, the assumed hypothesis is size has a positive association with profitability therefore the hypothesis of the current study is rejected. The default value for the significance level is 0.05. In this case where the probability is above 0.05 then the hypothesis will be rejected and if lower, will be acceptable.

Limitations And Direction Towards Future Research

One limitation of this study is that it considered 24 Conventional and Islamic banks of Pakistan. Due to the deficiency of time. If statistics are gathered from all the banks then the circumstances might be distinct.

Another restriction of this investigation is that information is absolutely financial and optional in nature. So results of the study were obtained from the information of 2013-2023 periods just due to accessibility of the information and changeability of information.

Another issue is that less work by Pakistani researchers on the performance of the Pakistani banking sector restricted an across-the-board investigation of the writing. Additionally, just profitability is utilized as the measure of execution. Industry particular components adding to the execution are not enclosed in this paper.

Recommendations And Suggestions

Stakeholders will use the statistics and measurements from the aftereffect of this review and find that at which time they pull back their invested money. By perceiving the component which impact Return on assets, new speculators can fundamentally be inspected annual reports of financial forms and will settle on commitment or capital financing decisions in better way.

Technological developments also act important part in benefit of banks and give confirmations that those banks which have up-to-date technology and innovations are generally more profitable as compare to their compotators. The administration of banks prefers those components that help to expand and enhance profit and attempt to reduce their liabilities.

The financial organizations should maintain a specific level of Liquidity to avoid any liquidity related issues. Banks can also work on factoring whether non-recourse basis or recourse basis to get better cash management and enlarge liquidity.

The non-performing advances ought to be given the significant and critical consideration by sharp work forces and personnel's the affect the position and performance of banks. On the premise of the advanced arrangement of the banks, banks ought to recognize their clients having perpetual or convenient issues concerning non-reimbursement of loans by building up the arrangements to support or upgrade the odds of reimbursement of advances. To recover the most extreme advance banks must take after the lawful systems for the execution of collateral and guarantee.

Banks additionally estimate the financial forecasts and changing examples of the financial and economic indicators and on the commence of these indicators they deal with the way of their credit portfolios.

VI. Conclusion

In this study, an empirical framework is conducted to examine the effect of bank-specific determinants on the profitability of Pakistani banks is presented. The basic objective of the study is to investigate the effect of different determinants on the profitability of banks and the use of a suitable econometric method to estimate the dynamic panel data models.

This study explains an effective and efficient image of the profitability of Pakistani banks for the period ranging 2013–2023. The study used a sample of 24 banks operating in Pakistan including both private and commercial banks. According to micro independent determinants, profitability is positively affected by productivity growth and credit risk which indicates that if productivity growth of a bank increases the profitability also increases and vice versa. Same in the case of credit risk which is positively affected by profitability. The loan loss provision / total loans are used to calculate credit risk, banks generally make provision for such loans which stands unrecovered and doubtful. In case not recovered, the outcome will have a negative effect on bank's profitability. So the study indicates a negative association between credit risk and profitability of banks.

Whereas, size, capital, and operating expense management negatively affect bank's profitability. This indicates that if the size of a bank increases, and results in a negative and inverse effect on profitability. If the size of a bank increases alternatively the profitability of that bank decreases and vice versa.

The above study indicates that if the capital of banks increase the profitability decreases. We know that banks gain profit on investments and advanced. If the bank cannot invest or forwarded loans, then it cannot gain profitability.

Such in the case of operating expense management if increased will result in deficient profitability and vice versa.

The effectiveness of the variables is measured with return on assets (ROA).

References

[1] Ahmad, A., Malik, M. I., &Humayoun, A. A. (2010). Banking Developments In Pakistan: A Journey From Conventional To Islamic Banking. European Journal Of Social Sciences, 17(1), 12-17.

[2] Ahmad, S., Nafees, B., & Khan, Z. A. (2012). Determinants Of Profitability Of Pakistani Banks: Panel Data Evidence For The Period 2001-2010. Journal Of Business Studies Quarterly, 4(1), 149.

[3] Alexiou, C., & Sofoklis, V. (2009). Determinants Of Bank Profitability: Evidence From The Greek Banking Sector. Economic Annals, 54(182), 93-118.

[4] Ali, K., Akhtar, M. F., & Ahmed, H. Z. (2011). Bank-Specific And Macroeconomic Indicators Of Profitability-Empirical Evidence From The Commercial Banks Of Pakistan. International Journal Of Business And Social Science, 2(6), 235-242.

[5] Ali, M. E.W. (2010). Evaluating The Effects Ofdeposit Dollarization In Bank Profitability. Journal OfbankingAnd Finance, 12(1), Pp. 55-87.

[6] Anbar, A., & Alper, D. (2011). Bank Specific And Macroeconomic Determinants Of Commercial Bank Profitability: Empirical Evidence From Turkey.

[7] Athanasoglou, P. P., Brissimis, S. N., & Delis, M. D. (2008). Bank-Specific, Industry-Specific And Macroeconomic Determinants Of Bank Profitability. Journal Of International Financial Markets, Institutions And Money, 18(2), 121-136.

[8] Azhar Rosly, S., & Afandi Abu Bakar, M. (2003). Performance Of Islamic And Mainstream Banks In Malaysia. International Journal Of Social Economics, 30(12), 1249-1265.

[9] Beck, T., & Rahman, M. H. (2006). Creating A More Efficient Financial System: Challenges For Bangladesh (Vol. 3938): World Bank Publications.

[10] Bhatti, G. A., & Hussain, H. (2010). Evidence On Structure Conduct Performance Hypothesis In Pakistani Commercial Banks. International Journal Of Business And Management, 5(9), 174.

[11] Bourke, P. (1989). Concentration And Other Determinants Of Bank Profitability In Europe, North America And Australia. Journal Of Banking & Finance, 13(1), 65-79.

[12] Boyd, J. H., & Runkle, D. E. (1993). Size And Performance Of Banking Firms: Testing The Predictions Of Theory. Journal Of Monetary Economics, 31(1), 47-67.

[13] Campbell, A. (2007). Bank Insolvency And The Problem Of Nonperforming Loans. Journal Of Banking Regulation, 9(1), 25-45.

[14] Chirwa, E. W. (2003). Determinants Of Commercial Banks' Profitability In Malawi: A Cointegration Approach. Applied Financial Economics, 13(8), 565-571.

[15] Davydenko, A. (2010). Determinants Of Bank Profitability In Ukraine. Undergraduate Economic Review, 7(1), 2.

[16] Demirgüç-Kunt, A., &Detragiache, E. (1998). The Determinants Of Banking Crises In Developing And Developed Countries. Staff Papers, 45(1), 81-109.

[17] Dietrich, A., &Wanzenried, G. (2011). Determinants Of Bank Profitability Before And During The Crisis: Evidence From Switzerland. Journal Of International Financial Markets, Institutions And Money, 21(3), 307-327.

[18] Eichengreen, B., & Gibson, H. D. (2001). Greek Banking At The Dawn Of The New Millennium.

[19] Fama, E. F. (1980). Banking In The Theory Of Finance. Journal Of Monetary Economics, 6(1), 39-57.

[20] García-Herrero, A., Gavilá, S., &Santabárbara, D. (2009). What Explains The Low Profitability Of Chinese Banks?. Journal Of Banking & Finance, 33(11), 2080-2092

[21] Gul, S., Irshad, F., & Zaman, K. (2011). Factors Affecting Bank Profitability In Pakistan. The Romanian Economic Journal, 39(14), 61-89.

[22] Gyamerah, I. A., & Amoah, B. A. B. (2015). Determinants Of Bank Profitability In Ghana. International Journal Of Accounting And Financial Reporting, 5(1), 173-187.

[23] Hassan, M. K., & Bashir, A. H. M. (2003, December). Determinants Of Islamic Banking Profitability. In 10th Erf Annual Conference, Morocco (Pp. 16-18).

[24] Jaber, J. J., & Al-Khawaldeh, A. A. (2014). The Impact Of Internal And External Factors On Commercial Bank Profitability In Jordan. International Journal Of Business And Management, 9(4), 22.

[25] Javaid, S. (2011). Determinants Of Bank Profitability In Pakistan: Internal Factor Analysis. Department Of Management Sciences. Correspondence Concerning This Article Should Be Addressed To Khalid Zaman, Department Of Management Sciences, Comsats Institute Of Information Technology, Abbottabad, Pakistan.

[26] Kosmidou, K. (2008). The Determinants Of Banks' Profits In Greece During The Period Of Eu Financial Integration. Managerial Finance, 34(3), 146-159.

[27] Mansur, I., Zangeneh, H., & Zitz, M. S. (1993). The Association Between Banks' Performance Ratios And Market-Determined Measures Of Risk. Journal Of The History Of Economic Thought, 25(12), 1503-1510.

[28] M Ameer, B. (2015). Determinants Of Banking Sector Performance In Pakistan. Global Journal Of Management And Business Research, 15(6).

[29] Miller, S. M., &Noulas, A. G. (1997). Portfolio Mix And Large-Bank Profitability In The Usa. Applied Economics, 29(4), 505-512.

[30] Molyneux, P., & Seth, R. (1998). Foreign Banks, Profits And Commercial Credit Extension In The United States. Applied Financial Economics, 8(5), 533-539.

[31] Naceur, S. B. (2003). The Determinants Of The Tunisian Banking Industry Profitability: Panel Evidence. Universite Libre De Tunis Working Papers.

[32] Nisar, S. (2015). Determinants Of Bank's Profitability In Pakistan: A Latest Panel Data Evidence. Shenzhen Graduate School.

[33] Pilloff, S. J., & Rhoades, S. A. (2002). Structure And Profitability In Banking Markets. Review Of Industrial Organization, 20(1), 81-98.

[34] Rachdi, H. (2013). What Determines The Profitability Of Banks During And Before The International Financial Crisis? Evidence From Tunisia. International Journal Of Economics, Finance And Management, 2(4).

[35] Rattray, S. (2012, August 22). How Inflation Canreduce Your Annuity Income.Retrieved March23,2013, From Inflation Data.Com:Http://Inflationdata.Com/Articles.

[36] Sayilgan, G., & Yildirim, O. (2009). Determinants Of Profitability In Turkish Banking Sector: 2002-2007. International Research Journal Of Finance And Economics, 28, 207-214.

[37] Short, B. K. (1979). The Relation Between Commercial Bank Profit Rates And Banking Concentration In Canada, Western Europe, And Japan. Journal Of Banking & Finance, 3(3), 209-219.

[38] Spathis, C., Kosmidou, K., &Doumpos, M. (2002). Assessing Profitability Factors In The Greek Banking System: A Multicriteria Methodology. International Transactions In Operational Research, 9(5), 517-530.

[39] Stricker, P., & Sheehan, P. (1981). Hidden Unemployment: The Australian Experience (Melbourne Institute Of Applied Economic And Social Research, University Of Melbourne).

[40] Sufian, F. (2009). Determinants Of Bank Profitability In A Developing Economy: Empirical Evidence From The China Banking Sector. Journal Of Asia-Pacific Business, 10(4), 281-307.

[41] Trujillo- Ponce, A. (2013). What Determines The Profitability Of Banks? Evidence From Spain. Accounting & Finance, 53(2), 561-586.

[42] Tumin, V., Mikhalina, O., & Chmel, S. Y. (2011). Theoretical And Methodological Bases Of Management Of Corporation Ecological Stability. Izvestiya Of Higher Educational Institutions. Ser. Economy, Finance And Production Management(1), 82.

[43] Uddin, S. S., & Suzuki, Y. (2011). Financial Reform, Ownership And Performance In Banking Industry: The Case Of Bangladesh. International Journal Of Business And Management, 6(7), 28-39.

[44] Zhang, X., & Daly, K. J. (2013). The Impact Of Bank Specific And Macroeconomic Factors On China's Bank Performance. Global Economy And Finance Journal, 6(2), 1-25.

[45] Zopounidis, C., & Kosmidou, K. (2008). The Determinants Of Banks' Profits In Greece During The Period Of Eu Financial Integration. Managerial Finance, 34(3), 146-159.