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Internal Determination of Profitability of Commercial Banks Operating in Pakistan

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Abstract
The research examined the internal factors impacting the profitability of 15 commercial banks operating in Pakistan. We have taken 10 years' data of selected banks from the time period 2014 to 2023. We used Return on Assets (ROA) as our dependent variable while Debt to Assets (DTA), Deposits to Assets (DPTA), Equity to Assets (ETA) and Bank Size (LTA) are taken as independent variables. The research discusses around quantitative approach with the help of secondary data from the financial statements and State Bank of Pakistan websites of the selected banks. Data were analyzed using multiple statistical tests and methods to evaluate the internal elements affecting commercial banks profitability. Descriptive statistics shows significant variation in profitability and financial structure across banks. Correlation reveals weak positive relationship between ROA and both DPTA (0.1645) and DTA (0.1390), showing that greater reliance on deposits and debt marginally enhance profitability. While a weak negative correlation among ROA and LTA (-0.1507) suggests minor profitability issues for larger banks. Regression Analysis point out that internal factors limited explanatory capacity, with bank size showing a statistically significant negative effect. The study concludes that while internal factors affect profitability, external factors outside the banks like market conditions, economic policies or more also impact the profitability. Therefore, further research is needed to investigate the external influence.

Keywords
Profitability, Commercial Bank, Financial Statement, Economic Policies, Market Condition, State Bank of Pakistan. Bank Size, Equity to Assets, Debt to Assets, Deposit to Assets.

Introduction

The profitability of commercial banks is a key indicator of their financial health and stability, shaping not only the institutions themselves but also the broader economy in which they operate. In Pakistan, a country undergoing rapid economic changes and a burgeoning financial sector, identifying the internal variables of bank profitability is vital for both practitioners and policymakers. The banking industries serves as a backbone for economic development, playing a

pivotal role in mobilizing savings, facilitating investment, and providing essential financial services(Naceur, 2003).

Significant reforms, deregulation, and increased competition have characterized the evolution of the banking landscape in Pakistan. These changes have compelled banks to adopt more efficient management practices and innovative strategies to sustain profitability in a competitive environment(Yao et al., 2018). As such, understanding the internal dynamics of banks, including management efficiency, asset quality, capital adequacy, and cost control, is essential for analyzing their financial performance. Profitability is typically measured using metrics such as return on assets (ROA) and return on equity (ROE), reflecting profit-generating capacity of banks relative to its total assets and equity. However, profitability is influenced by a host of internal factors that go beyond simple financial ratios. Internal determinants, such as management practices, operational efficiency, and risk management strategies, play a significant role in shaping profitability outcomes(Athanasoglou et al., 2005).

One of the most significant internal determinants of profitability is asset quality, referring to the proportion of non-performing loans (NPLs) in a bank's portfolio. High levels of NPLs indicate unfavorable credit risk management and can diminish a bank's capital foundation, affecting its ability to generate profits. Effective credit risk management practices are essential for maintaining a high-quality loan portfolio and ensuring long-term profitability(Salas, 2002). Management efficiency is another crucial factor, reflecting how efficiently bank uses its resources to generate income. Operational ratios can gauge efficiency, and banks with streamlined operations and lower operating costs are better positioned to achieve higher profit margins(Osborne et al., n.d.).

Capital adequacy is a major element of a bank's financial health, as well-capitalized banks are better equipped to absorb losses, manage risks, and navigate economic downturns, ultimately enhancing profitability (Berger & Udell, 1994). In Pakistan, the State Bank of Pakistan (SBP) mandates minimum capital requirements to ensure banks maintain a robust capital base, vital for long-term sustainability. Cost control is equally essential, particularly in an environment of rising operational expenses. Banks that optimize their cost structures through technological advancements and automation can reduce overhead costs while maintaining service quality, improving operational efficiencies, and enhancing profitability(Farhan Akhtar et al., 2011).

The competitive environment in Pakistan's banking sector has intensified, with domestic and international players striving for market share. Banks that innovate and adapt to meet changing customer preferences through unique products and services are more likely to sustain profitability(Javaid et al., 2011a). Additionally, the regulatory landscape, governed by the SBP, plays a pivotal role in ensuring financial stability. Compliance with regulatory requirements can influence a bank's operational flexibility and, consequently, its profitability(Hassan & Bashir, n.d.-a). Examining how internal factors interact with regulatory mandates provides a comprehensive understanding of the dynamics affecting profitability in the banking sector.

This research explores the internal determinants of profitability for commercial banks in Pakistan through a mixed-methods approach, combining quantitative and qualitative methodologies. The quantitative component involves analyzing financial statements and performance metrics from a sample of banks to empirically assess the relationships between internal factors and profitability. Complementing this is qualitative research through interviews and surveys with bank management and industry experts, capturing the nuances and complexities of the banking landscape. By integrating these methodologies, this study aims to provide a holistic perspective on the internal determinants of profitability in commercial banks.(Athanasoglou et al., 2006; Hossain et al., 2017)

The findings are expected to significantly contribute to the existing literature on banking profitability, particularly within the context of Pakistan, and offer valuable insights for bank management to devise strategies that enhance profitability and ensure sustainable growth. As the banking sector continues to evolve amid economic changes and competition, understanding these determinants is crucial for fostering financial performance and driving economic development. This research seeks to provide actionable recommendations for banks and policymakers, supporting the creation of a more resilient and robust banking sector that can meet the challenges of the modern economic landscape.

Problem Statement

To express and measure the elements that impact the profitability of private banks of Pakistan.

Research Questions

What are the internal drivers that influences the economic success of private commercial banks functioning in Pakistan.
What are the relationships between the profitability and internal factors and their impacts on bank's profitability.

Purpose of Research

The important motive of the research is to inspect how multiple variables influence the economic efficiency of banking firms of Pakistan.

Research Objectives

Examine the relationship between important internal financial indicators and the profitability of commercial banks in Pakistan.
Find out the factors that lead to higher profit.
Explore the factors that can be harmful for the Commercial Banks profitability
Find out the influence of bank size and market share on profitability.

Research Hypothesis

H_0: Internal determinants significantly affect the profitability of commercial banks of Pakistan.
H_1: Internal factors do not affect the profitability of commercial banks of Pakistan.

Scope of Research

The field of analysis is comprised with 15 commercial banks inside the duration of 2014 to 2023. Different factors are taken into account like assets return, equity ratio, bank size and more, also we examined and explored some exceptional results those can only be applicable to commercial banks of Pakistan.

Limitation of the study

The study only finds out the results from the selected 15 commercial banks, which cannot fully represent the entire banking sector of Pakistan. The banks are selected based on some criteria like size, market presence etc.
The research on finds out the results from commercial banks only.
We only examine the internal components that modify the economic success of banking institutions because of less resources or data. Research ignores outward factors such as macroeconomic conditions, industry competition, or regulatory reforms that also have significant impact on banks' performance.

This research's results only be applicable to Pakistani banking sector, cannot be considered globally.

Literature Review

The profitability of commercial banks has garnered significant attention in recent financial literature due to its critical role in sustaining economic growth and maintaining financial stability. As financial markets become more complex and volatile, understanding the internal factors that drive bank profitability has become essential. These factors include capital adequacy, asset quality, management effectiveness, cashflow management, and bank size, each of which directly impacts the bank's ability to generate profit. This literature review synthesizes key studies and provides an analysis of these determinants, supported by recent research and findings.(Hassan & Bashir, n.d.-b).The results that were obtained from profitability model indicated that bank size, credit risk, funding risk and stability have statistically significant impacts on profitability, while liquidity risk showed the statistically insignificant impact on profitability. Regression findings from stability model reveal that bank size, liquidity risk, funding risk and profitability have statistically significant impacts on stability, while credit risk had an insignificant effect on stability. However, the effect of the financial crisis is uniform and showed statistically insignificant impact in both models.(Ali & Puah, 2019). The empirical results of my study is that cost efficiency, liquidity and capital adequacy are those variables in the check of management that decide the profitability of commercial banks circulating in Pakistan. Other variables like deposits and size of the bank did not demonstrate any effect on economic efficiency.(Dawood, 2014).

Capital Adequacy

Capital adequacy is a fundamental determinant of bank profitability, representing the bank's ability to absorb losses while maintaining solvency. Almumani (2014) pointed out the importance of capital adequacy in stabilizing financial institutions and reducing bankruptcy risks, which, in turn, supports profitability. Similarly, Javaid et al. (2011) emphasized that a strong capital base enables banks to withstand economic downturns, thus enhancing their profitability. The authors observed that capital adequacy ratios, such as total equity to total assets, considerably contribute to Return on Assets (ROA), with well-capitalized banks demonstrating higher stability and profit margins.

Expanding on these findings, (Messai et al., 2015)conducted a study on European banks and observed that capital adequacy ratios positively impacted bank profitability by providing a financial cushion during economic crises. They concluded that banks with strong capital reserves could absorb financial shocks more effectively, thereby safeguarding profitability. Their study also highlighted the negative effect of liquidity and inflation on profitability, suggesting that capital adequacy is especially important for banks operating in volatile economic environments. More recent studies, such as those by (Mahmood Shah Khan et al., n.d.), have reaffirmed that higher capital ratios positively influence profitability. They noted that the global financial crisis of 2007 underscored the need for adequate capital, as insufficient capital reserves led numerous banks to financial distress. This evidence indicates that capital adequacy remains a crucial element in the profitability of banks, especially in developing markets like Pakistan.

Asset Quality

Asset quality, often measured by defaulted loans as a proportion of total loans, reflects a bank's credit risk and loan portfolio health. High NPL ratios can erode profitability by necessitating larger provisions for potential loan losses, thus impacting net income. In this context, (Javaid et al., 2011b)found that poor asset quality negatively affects profitability, as higher loan defaults lead to reduced ROA and Return on Equity (ROE). (Abbas and Tahir nd.2021). further observed a significant negative correlation between asset quality and profitability in Pakistani banks,

emphasizing the need for rigorous credit risk management to minimize losses and improve financial outcomes.

(Sarwar et al., 2018).categorized determinants of profitability into internal and external factors, noting that banks have substantial control over internal aspects like asset quality. Their study found that high NPLs reduce profitability due to increased credit risk, and they recommended enhanced screening processes to improve loan quality. Other researchers, such as Erin and Lace (2013), echoed these findings by asserting that maintaining high asset quality can help banks withstand financial shocks. Recent research suggests that asset quality remains a critical determinant of bank profitability, particularly in emerging markets, where credit risks are often elevated due to economic instability.

Management Efficiency

Management efficiency, typically assessed through the cost-to-income ratio, measures how effectively a bank controls its operating expenses relative to income generation. Efficient management allows banks to reduce costs, which directly enhances profitability. (Abdelkarim & Almumani, 2018)suggested that management efficiency is crucial for achieving high ROA and ROE, as it reflects the bank's ability to manage resources effectively. In their analysis, Javaid et al. (2011) confirmed that banks with lower cost-to-income ratios tend to perform better financially, as efficient operations lead to lower overhead costs and higher net profits.

(Molyneux & Thornton, 1992)were among the first to analyze management efficiency across 18 countries, finding that effective resource management significantly boosts profitability by optimizing operational costs. In a recent study, (Farooq et al., 2021)explored the impact of management efficiency on profitability in the Pakistani banking sector, concluding that efficient management practices, such as digitalization and streamlined processes, contribute to sustained profitability. They argued that in competitive markets, management efficiency serves as a differentiator, helping banks attract customers and improve their market share. This evidence reinforces the importance of management efficiency in enhancing profitability, particularly for banks operating in cost-sensitive and competitive markets.

Liquidity Management

Liquidity management is crucial for banks to meet their short-term obligations while sustaining profitability. Effective liquidity management ensures that banks have sufficient funds to meet deposit withdrawals and other liabilities without sacrificing profitability. (Bordeleau & Graham, 2010)demonstrated that optimal liquidity levels positively influence profitability, as banks with adequate liquidity can manage sudden cash outflows without resorting to costly asset sales. Conversely, excessive liquidity may indicate missed investment opportunities, thereby limiting income potential. In the context of Pakistani banks, (Aleem et al., 2022)highlighted the role of liquidity management in profitability. Their study revealed that banks maintaining an optimal level of liquid assets are better positioned to generate consistent profits, as they can engage in lending and investment activities without liquidity constraints. Ahmad and Hassan (2021) expanded on this by arguing that banks need to adopt a balanced liquidity approach to avoid the pitfalls of both over- and under-liquidity. This balance is particularly relevant in emerging markets, where liquidity risks can be more pronounced due to economic volatility and limited access to capital markets.

Bank Size and Economies of Scale

Bank size, often represented by the total asset base, has a mixed relationship with profitability. Larger banks gain advantages from economies of scale, allowing them to allocate fixed cost across

a bigger assets base and improve operational efficiency. Javaid et al. (2011) observed that bank size positively affects profitability, as larger banks can leverage their resources to achieve higher ROA and ROE. However, Berger (1995) noted that while size enhances profitability up to a certain point, excessive growth may lead to diseconomies of scale, where operational complexity reduces efficiency. (Hossain et al., 2017)confirmed that bank size positively influences profitability by providing a competitive advantage through enhanced operational capacity and market reach. However, they cautioned that banks growing beyond their optimal size may face diminishing returns, as bureaucratic inefficiencies increase operational costs. For Pakistani banks, Abbas and Ahmed (2021) found a similar trend, noting that medium-sized banks perform optimally compared to both smaller and very large banks. This nuanced relationship suggests that while size contributes to profitability, it must be strategically managed to maximize economies of scale without incurring inefficiencies. Thus, the literature reviewed suggests that capital adequacy, asset quality, management efficiency, liquidity management, and bank size are key internal determinants of bank profitability. Well-capitalized banks with high asset quality, efficient management practices, optimal liquidity levels, and appropriate scale can achieve sustainable profitability. The insights provided by recent research underscore the importance of these determinants, particularly for banks in emerging markets like Pakistan, where economic volatility and regulatory constraints present unique challenges. Future research could further explore how these factors interact with macroeconomic variables to influence profitability, providing a more comprehensive understanding of bank performance in diverse economic contexts.

Cost control

Effective cost control is essential for enhancing profitability, especially in a climate of rising operational expenses. Banks must adopt strategies to optimize their cost structures while maintaining service quality (Akhter et al., 2016). The use of technology and automation can play a significant role in improving operational efficiencies and reducing overhead costs. In the current digital age, banks that leverage technological advancements can better position themselves to achieve higher profitability through streamlined processes and improved customer service.

Research Methodology

This portion covers the population of research, sample, sampling design and technique, and data collection. Also, a description of dependent together with independent variables and the research framework.

Population

The research is to explore the internal factors that impact the profitability of commercial banks operating in Pakistan. There exist approximately 50 banks Commercial Banks, Government Owned Scheduled Banks, Foreign Banks, Islamic Banks, microfinance Banks. The population of our research is all Commercial Banks of Pakistan.

Sample

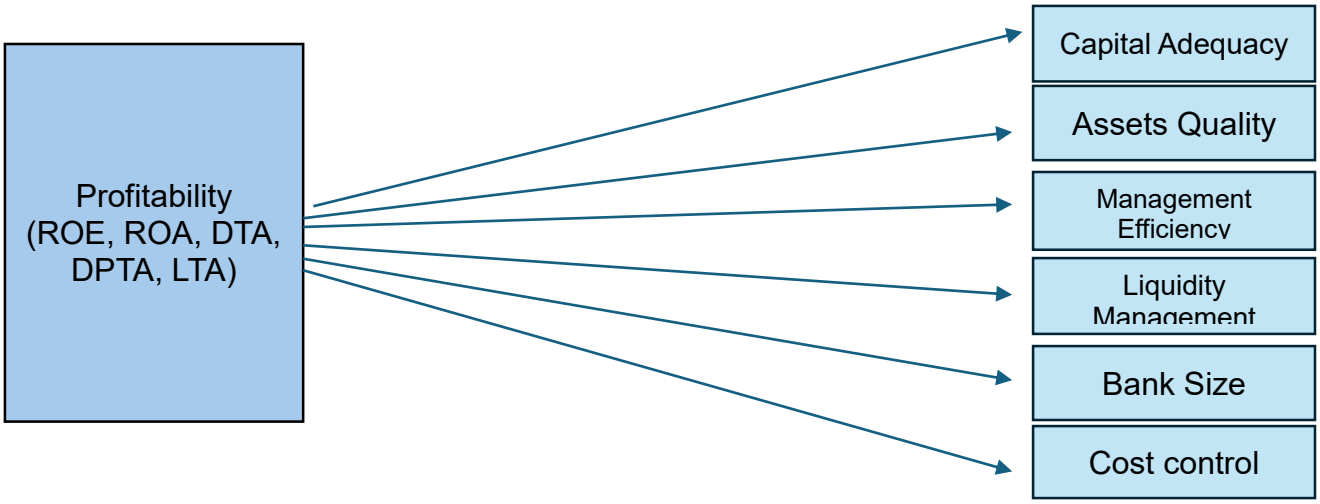
Our motive is to analyze the internal determinants of all commercial banks operating in Pakistan, but due to time limitation and resources we have only chosen 15 commercial banks to get a profitability overview of banking industry in Pakistan.

Sampling design and Collection

Research in nature is quantitative research for which we prefer secondary data. Data collected from the selected banks' financial statements and State Bank of Pakistan website.

Research Framework

This has great importance in research which identifies the variables that are dependent and independent in the study. In our research we have discussed different variables which significantly affect the profitability of commercial banks. It shows the relationship between dependent and independent variables.



Research Model

Dependent variables

Return on Assets

It is a financial matrix that calculates the profitability relative to its total assets. It shows how a company utilizes its assets to generate maximum profit. Return on Assets is calculated by dividing net income with total assets.

Independent Variables

Equity to Assets

The equity to assets mean the amount of money that is been invested by the owner of a firm or company. This ratio gets calculated by dividing total equity with total assets of a firm. A higher ratio of equity to assets indicates that the company has lower level of debt, and it is financially stable.

Debt to Assets

Debt to assets means the valium of money that is funded through debt instead of shareholders' equity. It is calculated by dividing liabilities to assets ratio. If the result is higher than 1, it expresses the company's most of the capital are capitalized through liabilities which are very risky for the company. Or if the result is smaller than 1, which indicates a positive sign for the company.

Deposits to Assets

Deposits to assets are used to measure the proportion of bank's total assets that are financed through customers' deposits. DPTA ratio indicates how much the bank is reliant on customers' deposits to finance its operations. Higher ratio shows the bank is much reliant on customers' deposits for fundings and lower ratio suggest bank may depend on other form of financing. It is computed by dividing deposits relative to total assets.

Bank size

Bank size refers to the scale of a bank typically measured by it total assets, but some other indicators are used to evaluate bank size like revenue, market capitalization, or the number of branches.

Results and discussion

Statical Analysis

Variables	Obs.	Mean	Std. dev.	Maximum
Return on Assets	150	0.0730395	0.023505	0.0363555 0.1556904
Debt to Assets	150	0.9046369	0.0998599	0.37249 1.032401
Deposits to Assets	150	0.6782905	0.2193584	0.0015442 1.248719
Return on Assets	150	0.0178 107	0.0196211	0.0001029 0.102589
Bank Size	150	19.99305	2.293	12.83464 22.62072

The study deploys a quantitative approach, using secondary data based on the yearly report of the chosen banks and the State Bank of Pakistan (SBP) web site. Specifically, the analysis is directed to establish relationships between profitability (dependent variable) and financial structure (independent variables). The dependent variable is Return on Assets, and the independent variables are Debt to Assets, Deposits to Assets and Bank Size, which is measured by the natural logarithm of total assets. Analyses using descriptive statistics were performed to explore the dataset and to understand the extent of variation in these variables across sample banks.

The ROA indicates the profitability of the banks, reflecting the ratio of how well the bank's assets are used to produce profit. For the 15 banks, the mean ROA is 0.0730, within moderate profitability levels. The standard deviation of 0.0235 indicates that the profitability differences between the banks are not very sharp. We observe minimum and maximum ROA of 0.0364 and 0.1557, respectively, showing a wide range of profitability among the sample banks. These figures highlight that some banks are extremely efficient in using their assets, while others cannot perform equally well. The average DTA is 0.9046, meaning most of the assets are provided by liabilities rather than equity. The standard deviation of 0.0998 suggests some variation in debt dependency across the banks. The minimum DTA value is 0.3725, reflecting relatively low debt reliance, while the maximum is 1.0324, indicating almost full debt funding. These variations may arise from different risk appetites and financial strategies.

The mean DPTA is 0.6783, implying that deposits fund about two-thirds of the asset base. A higher standard deviation of 0.2194 suggests significant diversity in deposit structures across the banks. Some banks are less dependent on deposits, with the lowest DPTA at 0.0015, while others are highly dependent, with the highest DPTA at 1.2487. These differences indicate varying reliance on customer deposits as a funding source. The size of banks, measured as the logarithm of total assets, averages 19.9931, showing a moderate scale of operations among the sample banks. With a

standard deviation of 2.293, the sample includes a mix of small, medium, and large banks. Economies of scale may benefit larger banks but could create competitive disadvantages for smaller ones. These descriptive statistics illustrate variations in internal factors across the 15 banks, providing a foundation for further analysis of how these variables influence profitability. Differences in debt levels, deposit reliance, and size reflect the operational and financial diversity of commercial banks in Pakistan.

Correlation Matrix

S No.	Variables	ROA	DPTA	DTA	ETA	LTA
1.	**Return on assets**	1.0000				
2.	**Deposits to Assets**	0.1645	1.0000			
3.	**Debt to Assets**	0.1390	0.2431	1.0000		
4.	**Equity to Assets**	-0.0866	-0.1995	-0.2361	1.0000	
5.	**Bank Size**	-0.1507	0.3062	0.4017	0.0273	1.0000

Summary

Second phase of this research investigate the correlation of profitability of 15 commercial banks in Pakistan which measured by Return on Assets (ROA) with key internal factors in the bank. The study uses secondary data from financial statements and the State Bank of Pakistan website to examine the relationship between ROA (dependent variable) and independent variables: DPTA, DTA, ETA, and Bank Size (LTA). The strength and direction of these relationships is exhibited with the correlation coefficients.

We show that the ROA has a weak positive correlation (0.1645) with DPTA, suggesting that banks which have more reliance on deposits as funding source are slightly more profitable. Stable and inexpensive source of funding deposits may help financial performance. Leverage as proxied by ROA has a weak positive correlation (0.1390) with DTA as well, indicating that the use of debt appears to slightly enhance profitability. Good debt utilization? Maybe these people borrowed money for something to invest and generate income.

Interestingly, while higher equity level shows a weak negative correlation (-0.0866) of ROA, slightly reducing profit. This could be because of the reason that the cost of equity is relatively higher compared with debt financing. Further, ROA demonstrates weak negative correlation (-0.1507) with bank size (LTA) implying that there is a slight decrease in profitability with increase in bank size. Part of this may be due to operational inefficiencies or challenges associated with large scale operations.

Reliance on customer deposits (DPTA) that has a moderate positive correlation (.2431) with DTA, implies the more deposits the banks maintain the more reliance on debt they have. This points to a mixed methodology of funding by having deposits and borrowing. There is a weak negative correlation (-0.1995) between DPTA and ETA indicating that higher deposit reliance is linked with lower equity levels (an indication for a preference for deposits over equity). Similarly, LTA shows

moderate positive correlation (0.3062) with DPTA, indicating that the larger banks rely more on deposits, though mainly due to their ability to attract customers and to maintain public trust.

Results from DTA present a moderate positive correlation (0.4017) with LTA, suggesting that larger banks tend to be more debt reliant, most likely due to their improved creditworthiness and access to financing. Funding as represented by DTA, however, shows a weak negative correlation (-0.2361) with ETA, which suggests a higher debt reliance is linked with lower equity levels, implying a tradeoff between these two equity terms.

A positive correlation (0.0273) indicated that there is no significant relationship between ETA and LTA. This implies that bank size does not determine equity levels much.

The correlation matrix shows at most weak and at least moderate relationships between the variables. There is a slight positive impact on profitability through deposits and debt, and minor negative trends for equity and size. These findings suggest that understanding how profitability is affected by factors is not simple and further analysis is required for quantifying their effects and determining causation.

Regression Analysis

Variables	**ROA**	**ROA**	**ROA**	**ROA**
Equity to	-0.0723	-0.0475	-0.0308	0.0109
Assets		(0.0684)	(0.0701)	(0.0705)
(0.0693)				
Debt to			0.0247	0.0192
0.0417				
Assets			(0.0165)	(0.0168)
(0.0175)				
Deposits to				0.0119
0.0185				
Assets				(0.00757)
(0.00758)				
Bank.				
-0.00257				
Size				
(0.000767)		(0.000767)		
Cons		0.0231***	-0.00105	-0.00544
0.0180				

	(0.00524)	(0.0169)	(0.0171)	(0.080)
N	150	150	150	150
r-sq	0.007	0.022	0.039	0.108

Standard errors in parentheses

ss*p <0.05, ** p <0.01, *** p<0.001

Regression Analysis

The profitability of 15 commercial banks in Pakistan was analyzed using regression analysis of the effects of different internal factors on profitability. ROA is a profitability measure and that is the dependent variable in this analysis. The independent variables are ETA, DTA, DPTA and Bank Size. Four models developed are shown that include later variables to see if all the possible effects concur.

Equity to Assets (ETA)

For all models, the coefficient ETA is also negative (-0.0723 to-0.0109), but all the results are not significant. Thus, we find that the impact of the equity percentage in a bank's assets on profitability is not robust and significant. This result is inconclusive, but there may be a negative relationship, such that banks with higher equity costs incur higher costs, lower profitability.

Debt to Assets (DTA)

For DTA, the coefficient is positive (0.0247, 0.0417) suggesting that high levels of debt marginally help profitability. However, these results are also not statistically significant. To put it another way, even using debt to boost profitability does not have a strong influence.

Deposits to Assets (DPTA)

The DPTA coefficient is positive, 0.0119 to 0.0185. They indicate that institutions that base their funding on deposits to a greater degree tend to be slightly more profitable. It is possible that this positive relationship exists due to deposits being a cheaper than other sources of funding. Yet, similar to the earlier variables, the impact is insignificantly significant.

Bank Size (LTA)

We find that the coefficient for bank size is negative (-0.00257) and is statistically significant. Bigger banks are much less profitable. That could be due to inefficient operations or scaling to manage larger operations. However, the negative effect is very small, but statistically significant, thus having a measurable impact on profitability.

Constant Term (Cons)

The coefficient of the constant represents profitability at baseline (when all independent variables are zero). In the first and last model, the value of this is significant with coefficients of .0231 and .0180. This also indicates a basic level of profitability in bank as unrelated to the factors analyzed.

R-Squared (r-sq)

R-squared values reveal how much the variability in ROA is explained by independent variables. These factors range in value from 0.007 to 0.108, much less than 1, thus, they account for only a small part of the (up to 10.8%) variability in profitability. This then implies that other external or internal factors outside this model might have a significant impact instead.

Internal factors such as equity, debt, deposits, and size, as proxied variables, have different effects on profitability, and most are not statistically significant, as revealed by the regression results. Profitability is negatively influenced by bank size, and deposits also exert a positive (but weak) effect. These findings further suggest that profitability stem from a cocktail of different factors and that further investigation will be needed to derive stronger predictors.

Conclusion

The research examines the internal element that may influence the profitability of 15 commercial banks in Pakistan. After analyzing three sets of information (descriptive statistics, a correlation matrix, and regression analysis), this research shows how variables such as ETA, DTA, DPTA, and Bank Size affect a bank's profitability measured via ROA. Average ROA indicates moderate profitability levels, where the banks show significant differences. Some banks are able to manage this limited resource and be more profitable than others. This variation emphasizes the significant contribution of effective asset utilization to strengthening the financial performance. A negative correlation was consistently demonstrated by ETA with ROA in both correlation and regression (multiple) analyses. As with equity, higher relative to assets leads to slightly lower profitability for banks. However, equity more expensive than debt or deposits reduces profitability while it provides financial stability. Yet, these effects were not statistically significant, suggesting that where and at what level one sits may not be the performance driver in this sample. DTA exhibited a weak positive relationship with ROA indicating that effective use of debt may be beneficial in generating profitability. Banks with higher debt can flow funds borrowed from the outside to invest in opportunities that would have otherwise made profits. However, the statistical sign of debt is insignificant too, which indicates that debt has not been a driving force for profitability by itself.

Banks' deposits are an important source of funding, and a positive deposit–ROA relationship was found across all analyses. Banks that use more deposits tend to be slightly more profitable, quite possibly because deposits are one of the lowest-cost funding options available. Though the impact was not statistically significant, the trend shows that deposit mobilization is essential to profitability. However, LTA was statistically negatively related to ROA, implying that larger banks had slightly lower profitability. This might have been due to the inefficiencies involved or difficulty in managing larger operations. Yet, size had a measurable, but not strong, impact. The internal factors explained only a small part (up to 10.8%) of the variability in profitability. This indicates that factors beyond the control of these companies, like market conditions, regulatory policies, or the state of the economy, may have a greater influence on profitability.

Further research

The results imply that internal drivers such as equity, debt, deposits and size confer some explanatory power for profitability, but their ultimate marginal contribution is relatively weak. Amongst these, deposits are a relatively important factor, and equity and size need to be carefully managed, lest the negative effects are driven into irreversibility. When used judiciously debt has a chance of contributing to profitability.

An approach to source of funds and operational efficiency management is to be considered and helps banks to enhance profitability. Another area of further research should examine external

factors and how they contribute to bank profitability as potential external factors may be more influential than the studied internal factors outlined above.

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