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ISLAMIC BANKS'S PROFITABILITY IN PAKISTAN

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ABSTRACT

Investigating the profitability of Islamic banks in Pakistan is the main goal of this study. The data range used for the panel regression study is from 2006 to 2021. To get the desired study results, many approaches including descriptive statistics, correlation metric, VIF, Breusch-Godfrey Serial Correlation LM Test, and Breusch-Pagan-Godfrey are used. The Hausman test's findings indicate that the Redundant Effect Test is appropriate for this investigation. The results demonstrate that Return on assets (ROE) is highly positively impacted by the Gross Domestic Product (GDP), Bank Size (BS), and Earnings per share (EPS). The ROA is greatly and adversely affected by the Non-performing Loans (NPL) and Inflation (INF). The study's conclusions suggest that by creating the bank's laws, Pakistan's Islamic bankers will undertake a critical examination into elements including non-performing loans and inflation rates. That would encourage the banks' increased productivity and profitability, which would immediately reinforce their significant role in the Pakistani economy.

Keywords: *Return on Assets, Gross Domestic Product, Bank Size, Earning Per Share, Inflation, Non-performing Loans, Islamic Bank, Pakistan.*

Introduction

One of the key measures of a bank's performance is its profitability, which indicates the standard of the management as well as investors' attitude, the bank's competitiveness, efficiency, including risk assessment abilities. According to the Parab and Patil (2018), the nation's financial stability is represented by the banking system. The performance as well as quality of the financial sector, that is depending mainly on a strong banking system and institutions, are the major factors that determine a nation's economic prosperity. Islamic banking is a systematic and defined financial system that mostly complies with Shariah law. Risk and return sharing are the two core components of Islamic banking. The use of funds for any prohibited purpose, such as interest, gambling, and speculative trading, is absolutely forbidden in Islamic banking. According to the study of the Abdou et al. (2014) that this trend has led to a widespread acceptance of Islamic financing, which is one of the fastest-growing systems. So, Islamic-banks have proved helpful for promoting economic stability as well as progress (Tabash & Anagreh, 2017). The most vital component in this study's evaluation of a bank's performance is profitability. In this study, ROA, which focuses on the company's ability to generate earnings in the company's activities by employing its assets, is used as a proxy for profitability.

Despite the fact that Islamic banking has been operating in Pakistan for thirty years, State Bank of Pakistan (SBP) began making major efforts to advance Islamic financing and investment methods in January 2000 when it founded the Center for Transparency in Financial Services (CTFS). Meezan Bank Limited received approval from the SBP in January 2002 to operate as Pakistan's first fully functional Islamic bank. GDP is a monetary indicator of the total market value of all finished products produced over a given time frame. Consumption, investment, government spending, and net exports are all included in the GDP. Profitability climb in response to rising GDP, which is positive for stocks. Because when GDP decreases, consumers and companies spend less, this causes the markets to decline. Consequently, the financial sector affects GDP and the economy as a whole, although indirectly, if there is a global recession. Imane (2020) examined GDP and inflation had a substantial impact on the profitability of Islamic banks in Jordan, Saudi Arabia, the United Arab Emirates, and Bahrain.

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The NPL reveals credit threat, the higher the NPL level, the less competent the bank is at managing credit, that will also translate into higher bank losses. Therefore, it may be claimed that NPL has a bad impact on ROA. NPL has a negative impact on ROA, according to research from Irawati & Maksum (2018), and Riyanto & Surjandari (2018). Similarly, NPL has a negative impact on ROA (Swandewi & Purnawati, 2021; Dewi, 2020). Inflation also has a negative impact on the economy because it makes people less interested in saving income, investing, and wanting to produce more. Prices rise as a result of inflation, which is extremely harmful to the community because it makes it difficult for people to afford the rising costs of basic necessities. According to the investigation of the Rachmawati and Marwansyah (2019) that inflation is very harmful to businesses because it drives up production and operating costs, which lowers banks ' profitability. Similarly, other studies also indicate that inflation has a negative impact on the profitability of the Islamic banks such as (Indriwati & Purwana, 2021; El-Chaarani et al., 2022; Alzoubi, 2021; Fuadi et al., 2022). In Yemeni Islamic banks, Al-Homaidi et al. (2020) analyse show bank size has a negative and substantial association with ROA. These banks stimulate various business activities by serving as brokers between bank depositors and investors. The banking industry is supporting Pakistan's economy and commercial survival. Banks are lending money aggressively, which not only gives the borrower money but also aids in the proper operation of the entire economy. This analysis makes it simple to understand how government effectiveness affects Islamic banks' capacity to make a profit. The study also looks at how Pakistan's Islamic banks are faring in terms of inflation, BS, NPL, EPS, and GDP.

Literature Review

One of the factors to consider while evaluating financial performance is profitability. Islamic banks have advanced significantly in recent years. Recent literature review relevant to this study will be discuss in this session of the article. Al-Homaidi et al. (2020) investigate the connection between the profitability of Yemeni Islamic banks and the degree of voluntary disclosure. The findings indicate that ROA has a negative as well as significant link with the Islamic bank's history, corporate governance information, corporate social disclosure, bank size, and bank age. Imane (2020) examined the profitability levels of ten Islamic banks in Jordan, Saudi Arabia, the United Arab Emirates, and Bahrain from 2008 to 2018 using a fixed effect model. The findings indicated that GDP and inflation had a substantial impact on the profitability of Islamic banks. Mahyudin and Rosman (2022) investigate how earlier studies have measured the effectiveness of Islamic banks using maqid al-Sharah. The results demonstrate that the lack of research on the factors that influence Islamic bank performance is underlined by the new trend in examining banks' performance from a maqid viewpoint. El-Chaarani et al. (2022) investigate the important key elements that may have an impact on the performance of Islamic banks prior to and especially throughout the COVID-19 epidemic period for GCC nations between 2017 and 2020. According to the study's findings, Islamic banks' financial performance is negatively impacted by high levels of non-performing loans and inflation, particularly during the COVID-19 epidemic.

Swandewi and Purnawati (2021) examine the impact of NPLs on ROA for the Indonesian Stock Exchange using a sample of 24 banks and also the capital adequacy ratio as a mediator. The findings indicate a negative as well as significant link between NPL and ROA. According to the study's findings The capital adequacy ratio mediates the impact of NPL on ROA. Indriwati and Purwana (2021) use a sample of 4 Indonesian Non-Foreign Exchange Sharia Commercial Banks

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to study the impact of inflation and GDP on ROA in. When inflation fell during the study period, ROA also fell in some instances in the financial statements, but when GDP increased, ROA fell once again. The results demonstrate show GDP as well as inflation both have an impact on ROA. Alzoubi (2021) used information from five Jordanian banks that were listed on the Amman Stock Exchange between 2009 and 2019 to examine the impact of inflation patterns on the performance of financial institutions. Results indicate a significant and unfavourable correlation between inflation rate and performance of banks. The findings also indicate that inflation has a significant impact on the Banks' performance. Fuadi et al. (2022) investigated the impact of inflation, the BI Rate, and the exchange rate on Indonesian Islamic banking profitability from 2009 to 2019. The Variance Decomposition (VD) test results revealed that inflation seemed to have a negligible or minor impact on the ROA.

Methodology

From 2006 until 2021, the study examined data collected from Pakistan's four Islamic banks. Data on GDP and inflation are gathered from the World Bank. The State Bank of Pakistan's website has also proven useful for gathering annual reports from Pakistan's Islamic banks. To investigate the profitability of the Islamic Banks in Pakistan. Mathematical equation of the model is below.

ROA = f (GDP, BS, NPL, EPS, INF)

Following econometric model is applied to evaluate the relationship between dependent and independent variables:

$ROA_{it} = \beta_0 + \beta_1 GDP_{it} + \beta_2 BS_{it} + \beta_3 NPL_{it} + \beta_4 EPS_{it} + \beta_5 INF_{it} + \varepsilon$

Here,

ROA = Return on Assets

GDP = Gross Domestic Product

BS = Bank Size

NPL = Non-performing Loans

EPS = Earnings per Share

INF = Inflation

ε=Error Term

Results

Descriptive Statistics

To identify trends as well as to estimate future values of parameters, descriptive statistics are used. It is separated into measures of central tendency and measures of variability.

Table: Descriptive Statistics

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	ROA	GDP	BS	NPL	EPS	INF
Mean	2.729906	8.326563	43852286	5.246719	2.526081	4.544688
Median	1.7	8.1	7537936	3.355	1.8054	4.6
Maximum	16.83	17.5	2.38E+08	19.04	15.7	11.2
Minimum	0.01	0.1	1778	0.01	0.01	0.1
Std. Dev.	3.672176	4.369442	62015605	5.01728	2.706421	2.413859
Skewness	3.02083	0.207608	1.421269	0.627051	2.975773	0.695465
Kurtosis	10.85368	2.573108	4.06914	2.270223	12.81339	4.891034
Jarque-Bera	261.8184	0.945708	24.59489	5.61426	351.2629	14.69518
Probability	0	0.623221	0.000005	0.060378	0	0.000644
Sum	174.714	532.9	2.81E+09	335.79	161.6692	290.86
Sum Sq. Dev.	849.5473	1202.797	2.42E+17	1585.905	461.457	367.0831
Observations	64	64	64	64	64	64

Source: Software E-Views 9.0

The higher the standard deviation value, the wider the distribution was, whereas the standard deviation value itself represents the average out of the given data. Values of the standard deviation of the ROA, GDP, BS, NPL, EPS and INF are (3.672176), (4.369442), (62015605), (5.01728), (2.706421), and (2.413859) respectively.

The degree of skewness is also used to compute symmetric data patterns. Skewness values of ROA, GDP, BS, NPL, EPS and INF are positively skewed. Kurtosis provides information about the distribution of data, whether this is leptokurtic or platykurtic. Kurtosis range is leptokurtic when value is greater than 3, Platykurtic if it is less than 3, and also has a standard value of 3. The ROA, BS, EPS, and INF data demonstrate a leptokurtic distribution, whereas the GDP and NPL data indicate the distribution is platykurtic.

Correlation Metrix

The bivariate correlation among the model's variables is demonstrated using Correlation Metrics. It also shows how strongly and in what direction the variables are moving. Whether they are connected favourably or negatively.

Table: Correlation Metrix

	GDP	BS	NPL	EPS	INF
GDP	1				
BS	-0.31438	1			
NPL	-0.04222	-0.22605	1		
EPS	-0.31677	-0.18396	-0.14088	1	
INF	-0.69433	0.124401	-0.00703	0.16718	1

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Source: Software E-Views 9.0

The correlation metrix's findings show that BS, NPL, EPS, and INF are all negatively associated with GDP. Similar to this, in this model, BS only has a positive correlation with the INF and a negative correlation with the NPL and EPS. NPL has a bad correlation with EPS and INF. Finally, this study's EPS and INF have a favorable correlation.

Multicollinearity

To test multicollinearity in the data, variance inflation factors have been used. Although each variable's value is less than 10, the table's analysis shows that multicollinearity is not present in the data.

Table: Variance Inflation Factors

Variable	VIF
GDP	4.327312
BS	1.628497
NPL	1.184118
EPS	1.514678
INF	2.456102

Source: Software E-Views 9.0

Autocorrelation

Autocorrelation has a pvalue that is less than 0.05. This indicates that there is autocorrelation with in data.

Table: Breusch-Godfrey Serial Correlation LM Test:

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	39.46178	Prob.value	0.000

Source: Software E-Views 9.0

Heteroskedasticity

Table: Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	22.38386	Prob.Value	0.000

Source: Software E-Views 9.0

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Heteroskedasticity has a p-value of less than 5%. This indicates that the data are heteroskedastic.

Redundant Test

This test is being used to assess if the Fixed Effect Method or Common Constant Method is more appropriate. When the p. value exceeds 5%, the Common Constant Method is more successful; however, when the p.value is below 5%, the Fixed Effect Method is better.

Table: Redundant Fixed Effects Tests

Redundant Fixed Effects Tests			
Equation: Untitled			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	8.632477	(3,54)	0.0001
Cross-section Chi-square	25.07262	3	0

Source: Software E-Views 9.0

The findings confirm that the p-value of the redundant test is less than 5%, so adopting the fixed effect approach is the appropriate method.

Hausman Test

To assess whether the Fixed Effect Method or the Random Effect Method is more appropriate, the Hausman test is used. Random Effect Method is more successful if p.value is greater than 5%, whereas Fixed Effect Method is more successful if p.value is less than 5%.

Table: Hausman Test

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.375096	6	0.9674

Source: Software E-Views 9.0

The p.value of Hausman test is more than 5%, applying Random Effect Method is more suitable.

5.9 Regression Analyses (Random Effect Method)

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The profitability of Islamic banks in Pakistan is examined using the random effect method.

Table: 5.7 Random Effect Method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP	0.077249	0.046664	1.655433	0.0139
BS	1.182308	1.20E-08	1.81533	0.0452
NPL	-0.03903	0.032137	1.214463	0.0301
EPS	0.104069	0.066776	1.558478	0.1252
INF	-0.03073	0.101073	-0.30406	0.0236
R-squared	0.799047	F-statistic	29.53813	
Adjusted R-squared	0.771996	Prob(F-statistic)	0	
Durbin-Watson stat	1.707135			

Source: Software E-Views 9.0

The Random Effect Method's findings show that GDP has a positive and significant impact on ROA, with coefficient and probability values of 0.077249 and 0.0139, respectively. Therefore, an increase in GDP of one unit will result in a rise in ROA of 0.077249 units. As a result, Pakistan's Islamic banks are now more profitable due to the GDP.

Likewise, the coefficient with probability values for BS are 1.182308 and 0.0452, respectively, indicating that BS has a positive and significant impact on ROA. The ROA will therefore increase by 1.182308 units for every unit increase in the BS. As a result, the profitability of Pakistani banks would improve as the size of Islamic banks' bank branches grew.

Additionally, NPL has coefficient and probability values of (-0.03903) and (0.0301), indicating it has a negative as well as significant impact on ROA, respectively. The ROA will therefore fall by 0.03903 units for every unit increase in the NPL, according to this calculation. NPL will thereby reduce the profitability of Pakistan's Islamic banks. This result is similar to the results of other studies like (Irawati & Maksum, 2018; Riyanto & Surjandari, 2018; Swandewi & Purnawati, 2021; Dewi, 2020).

Likewise, EPS has a positive as well as insignificant relationship with ROA, as indicated by its coefficient and probability values of 0.104069 and 0.1252, respectively. Therefore, it is not taking part in this study's analysis of the profitability of Islamic banks in Pakistan.

INF also has coefficient and probability values of (-0.03073) and (0.0236), which show that it significantly and negatively affects ROA. In other words, a one unit rise in INF will result in a 0.03073 unit fall in ROA. INF will thus lower the profitability of Pakistan's Islamic banks. Higher inflation will discourage savings, reducing total investment funds, and this lack of savings in Islamic banks will have a significant impact on their profitability. This result is silimar to the results of (Rachmawati and Marwansyah, 2019; Indriwati & Purwana, 2021; El-Chaarani et al., 2022; Alzoubi, 2021; Fuadi et al., 2022).

The R-squared value is 0.799047, which shows that the independent variables in the model can account for 79.9% of the changes in the dependent variable. The P-value is 0 and the F-statistics value is 29.53813. The reliability of the model and the model's suitability for analysis are

statistically significant findings. The Durbin Watson result is 1.707135, indicates that serial correlation problem is not present and that its value is extremely close to the ideal value 2. The variables chosen for this study are now recognised as having a good fit.

Conclusion

The main object of this study was to investigate the Profitability of Islamic banks in Pakistan. Return On Assets was tested on various variables such asGDP, BS, NPL, EPS and INF.. To run the panel regression analysis, data for the period of 2006-2021 was used to control dependencies of unobserved, independent variables on a dependent variable. Different methodologies were applied to attain the required results of the study like Descriptive statistics, Correlation Metrix, VIF, Breusch-Godfrey Serial Correlation LM Test, Breusch-Pagan-Godfrey. Result of the Hausman test showed that Redundant Effect Test was suitable for this study. The research concluded that the GDP had a positive as well as significant impact on ROA. Most importantly, the stud found out that the GDP served as a driving factor behind increased Islamic bank profitability in Pakistan. The study concluded that the BS positively affected ROA, therefore, higher the number of Islamic banks, greater the profitability of Pakistani banks.

Additionally, it concludes that: 1) the NPL significantly and negatively affected ROA and the profitability of Pakistan's Islamic banks will suffer due to NPL, 2) the EPS also has a small but favourable impact on ROA, 3) the INF significantly and negatively affects ROA, 4) The Islamic Banks' profits in Pakistan will decline as a result of INF, 5) Rising inflation will discourage people from saving money, which would reduce total investment funds, 6) The Islamic banks' profitability will be significantly impacted by this scarcity of savings.

It is highly recommended that Pakistan's Islamic bankers would conduct a judgmental investigation into factors including non-performing loans and inflation rates by making the bank's regulations stricter as it would promote the banks' improved efficiency and profitability. This in turn will directly strengthen their role in growing the Pakistan's economy.

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