



Research Article

Macroeconomic Indicators and Pakistan's Banking Industry's Shock Absorbing Capacity: A Case Study of Conventional and Islamic Banks

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ABSTRACT

The capacity of conventional and Islamic banks, operating in Pakistan, to absorb macroeconomic shocks is compared in this study. The study examines data from ten conventional and four Islamic banks from 2007Q1 to 2018Q4. The macroeconomic uncertainty is the volatility of inflation, interest rate, and output/GDP measured through GARCH (1,1). All macroeconomic variables have a significant impact on the performance of Conventional Banks (CB) which is shown by the panel estimation results, but in Islamic Banking (IB) only the rate of interest has a considerable impact on its performance; indicating a competitive relationship between the two banking systems. Furthermore, shock-absorbing models reveal that the volatility of the three macroeconomic factors does not affect the volatility of Islamic banks. The conventional banks' volatility model, on the other hand, shows that production volatility has a considerable positive impact on conventional bank volatility, implying that the conventional banking system is more vulnerable to economic uncertainty.

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INTRODUCTION

Banks perform their services in getting money in term of deposit from the creditors and provide loan or lend money to individual or the organization who would like to lend money to fulfil their financial need in public and private sector (Al-Qudah & Jaradat, 2013). Banks are the life blood for any financial system, to improve the circulation and their performance they perform their activities under the stringent regulation to protect the interest of their customers. To understand the economic performance, banking sector plays a very important role (Demirgüç-Kunt and Huizinga, 1999). Banks services are dependent on monetary policy that central banks use to manage the money supply and interest rates in order to accomplish macroeconomic goals such as price stability, full employment, and economic expansion, Central banks

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frequently oversee the government's finances, enable transactions, and occasionally oversee public debt. Central banks act as lenders of last resort during financial crises, giving money to banks that are having problems meeting their solvency requirements (Wasiuzzaman & Gunasegavan, 2013).

The Central bank has to regulate and supervise commercial banks and other financial institutions for preserving stability, customer's safety, and to reduce systematic risks (Abbas et al., 2014). Banks are required to maintain a certain level of capital adequacy to absorb potential losses. An increase in non-performing loans may erode a bank's capital, affecting its ability to meet regulatory requirements (Rashid, et al., 2015). A high level of non-performing loans indicates weaknesses in a bank's credit risk management practices it may prompt regulatory scrutiny and impact the bank's reputation (Ahmed et al. 2018). Banks may increase interest rates or tighten lending criteria to compensate for losses from nonperforming loans (Ongore & Kusa, 2013). This can impact the availability of credit in the broader economy. Addressing non-performing loans is crucial for maintaining a healthy financial system, and banks employ various strategies such as loan restructuring, provisioning, and recovery efforts to mitigate the impact of NPLs on their financial health.

Furthermore, the banking sector's performance aids in pinpointing the current state of the banking sector and comprehends the key elements that are vital in decision-making (Ali et al. 2011). The banks have significant role in the financial system, it's important to understand their operation and their changes which may affect their economic conditions, financial performance and their credit risk. Banking structure and performance are influenced by a variety of elements unique to banks, industry, finance, and macroeconomics. Despite heavily strong criticism in the recent financial crisis, the banking industry continues to play an important and fundamental role in delivering money to both individuals and businesses (Anbar & Alper, 2011). A well-performing banking sector will be able to protect against economic jolts, and may increase the possibility of economic development, and helps in the stability of the financial system.

Zaman et al., (2014), a well performing and healthy banking sector is necessary not only just for improving economic interaction among market groups, but also for achieving both distribution and operational resources, which helps in acceleration of economic stability and growth. Along with the best allocation of the resources the maximum returns on the investments are accepted by the stakeholder of the banks. In contrast, the unprofitable and hazardous banking industry causes financial volatility and has a detrimental impact on the economic growth process. Numbers of research studies have been conducted on the banking sector's performance in recent decades. Multiple factors like overall economic development, the standard of living, and the development of the financial sector have sparked interest in the banking industry (Shah & Jan, 2014). We're particularly curious about how macroeconomic volatility affects the bank's performance.

Banks are profit-maximizing economic agents that extend lending to borrowers in order to maximize profits. The decision to give credit to any borrower is based on the credit risk worthiness of the loan-seeking entity, whether an individual or a business, as well as the existing and potential level of insecurity in macroeconomic factors and the type of their growth rate. In volatile variables, there is a great deal of uncertainty (Sehrish et al., 2012). Banks become significantly more restricted in issuing loans during periods of increased current or predicted uncertainty, which limits their performance (Hassan Al-Tamimi, 2010). Uncertainty in the economy causes loan seekers to be more cautious when making loan decisions, resulting in a smaller market for loan-able funds (Tarawneh, 2006). On the other hand, the economic condition is also making loan seekers cautious as well. Their performance may be limited as a result of fewer loans and poor or no recovery of outstanding debts, resulting in nonperforming loans. As a result, this is augmented research which determines whether the volatility of macroeconomic variables in an economy can explain a major percentage of the variation in banking sector performance (Muda, et al., 2013).

Akhtar et al., (2011), the main purpose of the banks Islamic or the conventional banks are to lend or provide financing to the customers. Banks are more concerned with their profit margins which may affect internal and external factors on their profitability. Internal factors such as liquidity, bank size, capitalization, operating efficiency, and financial performance, as well as external factors such as inflation, interest rate, exchange rate, and GDP, all of which are influenced by the macroeconomic environment,

have a much impact on their profitability (Shaikh et al., 2015). Islamic banking is quickly expanding and becoming an important element of the global financial economy (Moin, 2008). In regular banking systems, which priorities its profit maximization, although in Islamic banking which consider social obligations and operate on the profit-and-loss sharing model, avoid using of interest as a profit-maximizing tool (Ramlan & Adnan, 2016). In contrast to the Islamic banking system, the conventional banking system follows the rules outlined by western thinkers such as Smith and Max Weber, rather than any divine mandate. This system has complete freedom to adapt in response to the requirements of society, without being bound by any set of rules dictated by God (Tan & Floros, 2012).

According to the extant literature, inflation has a positive link with bank profitability (Ali et al., 2018; Rashid & Khalid, 2017; Akhtar, et al., 2011). According to Ali, et al., (2018), the relationship between interest rate and bank profitability is negative, and Rashid & Jabeen (2016) discovered that interest rate is a uncountable or dismissive impact on the banks who works in Islamic system but a good impact on conventional banks. There is a directly relationship between interest rate and bank profitability, according to Rashid and Khalid (2017) and Yakubu (2016). In the case of Ali et al., (2018) and Combey and Togbenou (2017), the influence of exchange rate on bank performance is positive. GDP creates an upward slope in the enhancement of the profitability of bank (Ali, et al., 2018; Khan, et al., 2015; Osamwonyi & Michael, 2014; Kanwal & Nadeem, 2013; Bilal, et al., 2013; Rashid & Jabeen 2016). Inflation uncertainty has a beneficial impact on the entire sample as well as conventional banks, but has a adverse impact on Islamic banks. All models evidence show that interest rate uncertainty has a favourable influence (Rashid & Khalid 2017; Khan & Sattar, 2014).

This study compares the macroeconomic shock-absorbing capabilities of conventional and Islamic banking systems. The return on assets is used to evaluate each bank's performance (ROA). Hasanov et al., (2018), this is a three-part analysis that looks at the impact of bank-related variables such bank size, non-performing loans, and lag of return on assets, as well as macroeconomic variables like inflation, rate of interest, and GDP, on performance of banks. The influence of macroeconomic volatility on bank performance was the focus of the next layer of analysis, and the third model is looking into the impact of the same macroeconomic volatility on bank performance volatility, which is the volatility of return on assets (Gul et al., 2011).

METHODOLOGY

Identifying Volatility

The estimation of the volatility of the macroeconomics variables and the banking sector variables is based on the univariate GARCH models. The GARCH models comprises on two segments one is the means equation and other is the variance equation, a simple ARCH model may define as:

$$Y_t = X't\beta + \epsilon_t \quad (1)$$

$$\sigma_t^2 = C + \beta\epsilon_{t-1}^2 + \gamma\sigma_{t-1}^2 \quad (2)$$

Panel Estimation

Feasible Generalized Least Square (FGLS) has been used to understand the data in order to achieve the objective of this study. Over the period of time this method is appropriate for elongated panel along with hetero-scedasticity invariance of errors across panel and serial autocorrelation within panel's errors.

Due to long panel data; the estimation methods of constant and random-effects are not suitable.

$$y_{it} = \alpha + x'_{it}\beta + \mu_{it} + \epsilon_{it} \quad (3)$$

From the i...n the number of cross-section units is represented in "i", and the observation numbers over each cross-section unit from t.....n will be represented in t, the dependent variable is yit on every single cross-section entity in span of time t, all the independent variables are represented in xit, all cross-sectional units are represented in α which is the common intercept, μ_{it} cross-sectional explicit characteristics which remain same over period of time means, time-invariant and the regression error of each cross-section in every single period of time will be depicted through ϵ_{it} .

The random effect is not better than the fixed, if it has correlation with all the explanatory variables then intercept will be its part. If it is found no correlation with other explanatory variables it will be the part of error term with not much distraction and random effect stand the best. However, error-term is assumed homo-scedastic and serially uncorrelated in both fixed and random effects. In order to circumvent this problem panel FGLS is used when the errors are hetero-scedastic and serially correlated. (Parks 1967; Miller 2017).

Similarly, GMM is not a suitable tool for analysis as we have long panel data; that is why this study prefers to use FGLS. The FGLS estimation, instead of assuming the structure of heteroscedasticity, estimates the structure of heteroscedasticity from OLS in two steps. The standard form of FGLS is the following:

$$\hat{\beta}_{FGLS} = (X' \hat{\Sigma}_T^{-1} X)^{-1} X' \hat{\Sigma}_T^{-1} Y \quad (4)$$

$\hat{\beta}_{FGLS}$ = a standard panel FGLS estimator for the coefficient β , $\hat{\Sigma}_T^{-1}$ consistent estimated variance matrix of unknown variance-covariance matrix of errors Σ , X = exogenous variable in model, X' = averages of X . Y = endogenous variable in model. Since the main focus of his study is to understand the relation of macroeconomic apprehension with jolt bearing capacity between the Islamic Banking (IBs) and Conventional Banking (CBs). Other sector of the economy gets the macroeconomic policy impact after some time. This study tries to include the lags in model with the level variables.

Data and Model Specification

The sample size of this study comprises on total 14 banks; out of which 10 are commercial banks (CB's) and four are Islamic Banks (IB's). The study period duration is 2009 quarter-1 to 2019 quarter-4. The detail description of the variables is mentioned in Table-1. The banks and macroeconomic variables have been classified for the study. Bank's quarterly financial reports, Consumer Price Index, Interest rate, and rate of exchange are extracted from the banks and from IMF Database. Despite, quarterly data of GDP, that is extracted from the State Bank of Pakistan.

Table 1

Description of Variables

Variables	Description	Predictable Sign	Source
Profitability (ROA)	Return-on-Assets (ROA) is to describe the performance of Bank Management to utilize the resources of bank to generate income		
ROA=(Total Profit)/(Total Assets) 100		Official Website of Banks	
Bank Capital (BC)	The capital ratio is between the total equity to its total assets of a bank. Higher value of this ratio describes the higher performance of Banks		
BC=(Total Equity)/(Total Assets) 100	Positive	Official Website of Banks	
Bank Size (BS)	In finance literature the bank size measure as a natural log of total assets.		
BS = Ln (Total Assets)	Positive	Official Website of Banks	
(NPL)	NPL is the ratio of total NPL / total advances. Lower value of this ratio shows better performance of banks		
NPL= (Total NPL)/(Total Advances) 100	Negative	Official Website of Banks	
Gross Domestic Product (GDP)	All final goods and services Produced in economy during a year are the mandatory value of GDP.	Positive	State Bank of Pakistan
Inflation (INF)	Inflation expresses the all-general price level are increased. It measures the Average of Monthly Inflation	Positive / Negative	Inflation Monitor of State Bank of Pakistan
Interest Rate (INT)	Interest rate describes the amount charged from commercial banks and other institution they take from State Bank of Pakistan.	Positive	International Financial Statistics
Exchange Rate (EXCH)	Exchange rate is the currency value of one country compare to another country.		
Rupees per Dollar		International Financial Statistics	
Gross Domestic Product Volatility (GDP Vol)	GDP volatility describes the unanticipated variation in GDP over time. It's the Conditional Variance of GDP over the sample period.	Negative	Calculated through GARCH Model
Inflation Rate Volatility (INF Vol)	INF volatility describes the unanticipated variation in inflation over time. It's the Conditional Variance of inflation over the sample period.	Positive / Negative	Calculated through GARCH Model
Interest Rate Volatility (INT Vol)	Interest rate volatility describes the unanticipated variation in Interest rate over time. It's the Conditional Variance of Interest rate over the sample period.	Positive / Negative	Calculated through GARCH Model

Following three models are employed, based on the prescribed methodology:

$$ROA_{it} = \beta_1 + \beta_2 \ln BS_{it} + \beta_3 \ln NPL_{it} + \alpha_i \text{Inflation}_{t-k} + \partial_i \text{InExchangerate}_{t-k} + \eta_i \cdot \ln GDP_{t-k} + \theta_i \ln \text{Interestrates}_{t-k} + \mu_{it} \quad (1)$$

The equation-1 shows the model-1 where return on assets (ROA) is used as a proxy for bank performance. This model is utilized for both types of banking systems; to have some better comparison. The subscript 'i' is for individual banks, and 't' indicates the time dimension. The macroeconomic variables usually have lag effects in order to capture this effect various lag are also incorporated in the model which are indicated by subscript 'k' which measure the lag length. The list of explanatory variables comprises on bank particular variables, and macroeconomic variables.

$$ROA_{it} = \beta_1 + \beta_2 BS_{it} + \beta_3 NPL_{it} + \beta_4 \text{Inflation}_{t-1} + \beta_5 \text{Inflation}_{t-2} + \beta_6 \text{Inflation}_{t-3} + \beta_7 \ln \text{Exchangerate}_{t-1} + \beta_8 \ln \text{Exchangerate}_{t-2} + \beta_9 \ln \text{Exchangerate}_{t-3} + \beta_{10} \ln GDP_{t-1} + \beta_{11} \ln GDP_{t-2} + \beta_{12} \ln GDP_{t-3} + \beta_{13} \ln \text{Interestrates}_{t-1} + \beta_{14} \ln \text{Interestrates}_{t-2} + \beta_{15} \ln \text{Interestrates}_{t-3} + \beta_{16} ROA_{it-1} + \beta_{17} GDP_{Vol_t} + \beta_{18} \text{inflation}_{Vol_t} + \beta_{19} \text{Interest rate}_{Vol_t} + \mu_{it} \quad (2)$$

$$VOL ROA_{it} = \beta_1 + \beta_2 BC_{it} + \beta_3 GDP_{Vol_t} + \beta_4 \text{inflation}_{Vol_t} + \beta_5 \text{Interest rate}_{Vol_t} + \mu_{it} \quad (3)$$

Equation-2 defines the shock-absorbing model; where banking sector volatility is regress on macroeconomic indicators' volatility. This model is also estimated separately for Islamic banks and conventional banks, as the model-1 was estimated.

Empirical Results

The estimated results of model-1 are mentioned in Table-1, which examined the impact of key macroeconomic variables on banking sector performance. This specification has been used on panels for both conventional and Islamic banks (CBs and IBs). The incorporated macroeconomics variables are Real GDP, Exchange rate, interest rate and inflation are the most important macroeconomic indicators on which this model depends. For both the CBs and IBs, these results were obtained using panel generalized least square (GLS). The estimated outcome for conventional banking model shows that all the macroeconomic variables have significant impact on the return on assets. However, none of them have significant relationship with the Islamic banking returns, except interest rate.

Table 2

Estimated Results of Model-1

List of Explanatory Variables	DV: Return on Assets (ROA)	
	CBs	IBs
In Inflation (-1)	-0.368*** (0.004)	-0.056 (0.813)
In Inflation (-2)	0.059 (0.661)	0.043 (0.859)
In Exchange rate (-1)	-2.403* (0.095)	-3.049 (0.378)
In Exchange rate (-2)	-0.358 (0.799)	2.990 (0.359)
In Interest rate (-1)	1.307*** (0.000)	1.127* (0.091)
LnReal GDP(-1)	0.392 (0.305)	0.847 (0.299)
LnReal GDP(-2)	3.621*** (0.000)	0.725 (0.407)
LnSize of Bank	3.803*** (0.000)	8.645*** (0.000)
In NPL	-0.094** (0.010)	-0.078* (0.082)
Cons	-60.227*** (0.000)	-51.257*** (0.010)
Obs.	381	121

Note: Exclude the control Variables, Natural log is used for all the values'-value is in ().
*** p<0.01, ** p<0.05, * p<0.1 shows the significant level

On the basis of calculation, the initial lag of inflation has a negative and significant influence on the ROA of conventional banks at a 1% level of significance, whereas it has a negative but minor impact on the ROA of IBs. While the second lag of inflation has a positive but minor association with CB's and IB's ROA, which are consistent with the first lag of inflation (Knawel & Nadeem 2013). With a three-month lag period, a change in the exchange rate hurts both CBs and IBs' ROA. In the case of CBs, it is considerable, but in the case of IBs, it is minor. The lag effect of interest rates on the ROAs of CBs and IBs, on the other hand, is positive and significant at 1% and 10%, respectively. These coefficients show that interest has a greater impact on the ROA of conventional banks than on the ROA of Islamic banks. While the lag effect of real gross domestic product (GDP) on conventional banking (CB) and Islamic banking's (IB) rate of return (ROA) is positive and minor, the second lag of real GDP is significantly important in CB ROA but remains insignificant in IB ROA. The log of banks size's results is consistent with past expectations, as evidenced by its positive and very significant significance in both cases. However, the log of non-performing loans has a negative influence on both IBs and CBs' ROA, but the impact is significant at the 1% and 10% threshold of significance on CBs' and IBs' ROA, respectively.

Table 2 depicts the repercussion of volatility in macroeconomic variables as well as bank's particular variables are related to banking sector's performance. Two types of bank clusters have been estimated by the model by multiple times: CBs and IBs. To account for the effect of lag, model-2's effect includes most of the important macroeconomic variables and lag values of them, like rate of exchange and inflation with three lags, on the other hand two lags with interest rate and real GDP, instability or volatility of ROA and GDP lag, instability of inflation, unstable rate of interest, and size of bank, as well as Non-performing Loans (NPL). For the CB's and IB's, the model's findings are found using panel Generalized Least Square (GLS). Names of independent variables appear in the first column, CB findings appear in the second column, and IB findings appear in the third column.

Table 3

Estimated Results of Model-2

	DV: Return on Assets	
	Conventional Banks	IBs
Ln Inflation	-0.106 (0.498)	0.025 (0.953)
ln Inflation (-1)	0.003 (0.988)	-0.648 (0.175)
ln_ Inflation (-2)	-0.154 (0.411)	0.12 (0.775)
ln_ Inflation (-3)	-0.322** (0.023)	-0.002 (0.995)
Ln ER	-1.074 (0.582)	-2.074 (0.608)
ln ER (-1)	-2.863 (0.392)	-4.77 (0.449)
ln_ ER (-2)	-0.025 (0.994)	7.116 (0.26)
ln_ ER (-3)	-1.682 (0.487)	-3.856 (0.293)
Ln IR	2.446*** (0.001)	0.75 (0.698)
ln_ IR (-1)	-1.893** (0.043)	4.176** (0.021)
ln_ IR (-2)	2.050*** (0.01)	-2.842* (0.091)
Ln Real GDP	-0.995 (0.173)	1.419 (0.164)
Ln Real GDP (-1)	4.398*** (0.000)	3.841** (0.043)
Ln Real GDP (-2)	8.431*** (0.000)	2.209* (0.096)
Ln Bank Size	3.318*** (0.000)	6.436*** (0.000)
Ln Non-Performing Loan	-0.129*** (0.000)	-0.053 (0.2)
ROA (-1)	0.120** (0.01)	0.328*** (0.000)
Inflation Volatility	-2.064 (0.226)	-2.694 (0.509)
INTEREST Volatility	-1.769 (0.518)	-2.682 (0.674)
Real GDP Volatility	-53.278*** (0.000)	-44.184** (0.045)
_cons	-160.974*** (0.000)	-114.679** (0.015)
Obs.	371	117

Source: Authors' Own Estimation

Note: the significant level are *** p<0.01, ** p<0.05, * p<0.1. All the value in Natural Log except the dependent Variable. P-value is in ().
Exchange rate (ER), Interest rate (IR)

ROA of CBs and IBs has negatively and insignificantly affected by the Inflation and interest rate volatilities, as shown in Table-2. GDP volatility has adverse and considerable impact on both CBs and IBs' ROA. The findings reveal that inflation's impact on the efficiency of CBs and IBs is negligible. The increased lag coefficients show that inflation has no impact on IB performance in the long run, which is in line with the previous model. However, lag inflation, like the prior model, has a considerable negative impact on CB performance. In both types of banking scenarios, the effect of the exchange rate is negligible. In this model, the effect of interest rate is not steady; at the level, it is positive for CBs and inconsequential for IBs, however at the first lag, it is considerable and negative for CBs and encouraging for IBs. Both types of banking, first and second lags values are substantial and positive, national output, or real GDP, putting a regular positive impact on banking sector performance. It is undeniable that the traditional banking system benefits more from economic growth than the Islamic banking system. Non-performance loans (NPLs) have a large negative impact on CBs' ROAs while having no impact on IBs' ROAs. While the size of the bank has a positive and statistically substantial impact on ROA on both stream of banks, the size of banks putting a downward impact on ROA for both types of banks.

The results of the volatility model, equation-2, are used to examine the impact of macroeconomic variable volatility on CB and IB performance volatility. This model includes the volatility of main macroeconomic variables such as inflation, interest rate, and real GDP, as well as bank capital as a control variable. The panel Generalized least square technique is used to obtain all of these results. This specification calculates the effect of macroeconomic uncertainty on the ROA uncertainty.

Table 4

Estimated Results of Model3- Impact of Macroeconomic volatility on the banking sector volatility

DV: Return on Assets Volatility (ROAVol)		
IV	CBs	IBs
Volatility of inflation	0.189 (0.649)	-7.300 (0.134)
Volatility of interest	-0.319 (0.687)	0.100 (0.992)
Volatility of Real GDP	2.920** (0.040)	-21.351 (0.322)
Capital of Ln Bank	0.087*** (0.000)	0.293 (0.134)
_cons	0.01 (0.836)	0.619 (0.472)
Obs.	399	129

Note: significant level *** $p < 0.01$, ** $p < 0.05$, * $p < 0$. All the value in Natural Log except the control Variables. P-value is in ()

The volatility of ROA of CBs is notably putting impact by the unstable inflation on the other hand it is negative for IB's. Volatility of rate of interest is insignificant for mutual banking systems. Similarly, unstable GDP creates beneficial and substantial inducement on ROA's volatility of CB's while the negative insignificant impact on return volatility of IBs. The GDP's volatility variable shows that an increase in output volatility will increase the volatility of ROA of CBs.

CONCLUSION & POLICY RECOMMENDATION

The scope of this study can be defined as an investigation into Pakistan's banking industry's macroeconomic uncertainty and shock-absorbing capabilities. The findings reveal that macroeconomic variables have a major impact on the performance of conventional banks but not on Islamic banks. Inflation's three-month lag effect on traditional bank performance is negative and statistically significant. Similarly, the exchange rate's three-month delayed effect on traditional bank performance is negative and statistically significant. The interest rate is playing a positive and significant role on both conventional and Islamic bank performance. A high level of non-performing loans indicates weaknesses in a bank's credit risk management practices. It may prompt regulatory scrutiny and impact the bank's reputation. Banks may increase interest rates or tighten lending criteria to compensate for losses from nonperforming loans. This can impact the availability of credit in the broader economy. Addressing non-performing loans is crucial for maintaining a healthy financial system, and banks employ various strategies such as loan restructuring, provisioning, and recovery efforts to mitigate the impact of NPLs on their financial health.

The six-month lag effect of GDP has a statistically significant beneficial impact on traditional bank performance. The macroeconomic volatility factors demonstrate that inflation and interest rate volatility have no significant impact on ROA for both CBs and IBs, but GDP volatility has a large negative impact. The effects of macroeconomic uncertainty on banking performance volatility demonstrate that whereas GDP volatility increases commercial bank volatility, it has no effect on Islamic banks.

For policymaker macroeconomic factors are the big challenge for the banking sector of Pakistan. This research suggests some implication as follow:

- Owing to their greater shock absorbance capacity, by promoting the Islamic banking system in the country the effect of any adverse shock may mitigate.
- The most effective variable in relation of banking performance is the inflation that should be controlled. Saving of the creditors is very much depends on the inflation, high inflation reduces the availability of funds.
- Stability of the exchange rate (rupees against the dollar) is also important for banking sector performance, as the exchange rate is also affecting Bank performance negatively.

Competing Interests

The authors has declared that no competing interests exist.

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