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Article: **Impact of COVID-19 on the Performance and Stability of Conventional and Islamic Banks in the GCC Region, Malaysia, and Pakistan**

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Impact of COVID-19 on the Performance and Stability of Conventional and Islamic Banks in the GCC Region, Malaysia, and Pakistan

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Abstract

This study examines the impact of COVID-19 on the performance and stability of conventional and Islamic banks. The sample included all the 21 listed Islamic banks (IBs) and 44 listed conventional banks (CBs) from the GCC region, Malaysia, and Pakistan. Quarterly data of these banks covering the period January 2019 to June 2020 were obtained from their quarterly reports. Performance was measured by return on assets (ROA) and return on equity (ROE), while stability was measured by the Z-scores of these banks. Based on the previous literature, a better performance of IBs was expected because these banks are based on the participatory mode of financing instead of debt-based financing. However, the results of the current study showed a significant and negative impact of COVID-19 on the financial performance of both types of banks, suggesting that either type of banking was significantly affected during the pandemic. However, we did not find any significant evidence of the impact of COVID-19 on the stability of these banks.

Keywords: conventional banks (CBs), COVID-19, Islamic banks (IBs), return on assets (ROA), return on equity (ROE), stability

JEL Classifications: G01, G21, P24, M41

Introduction

The world of business and economics has faced various crises over the course of time. Some of them have had serious ramifications, such as the credit crisis of 1772 which started in London and rapidly spread to the rest of Europe and British colonies. The worst financial crisis of the 20th century is known as the ‘Great Depression’ of the 1930s. This crisis lasted almost 10 years and resulted in huge losses to the industrially developed countries (Crafts & Fearon, 2010). In 1973, the OPEC countries launched an embargo on the export of oil to the United States

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and its allies which abruptly raised the price of oil in these countries. The inflation rate also rose due to the increased oil prices. It interfered with the pace of development in these countries, thus this era is known as the era of stagnation. In 1997, Asian countries including Philippines, South Korea, Malaysia, Singapore and Thailand weathered the Asian Financial Crisis. Their stock markets and currencies took a plunge and lost their value up to 70%. Ultimately, the IMF helped them to get out of the crisis.

The Global Financial Crisis (GFC) started in 2007 in the US financial market and soon spread to the rest of the world. At the end of 2008, the losses of the financial institutions reached the amount of 4.7 trillion dollars. Extensive literature is available about the crisis and its causes (Jagannathan et al., [2013](#); Stiglitz, [2010](#); Gaiotti, [2013](#); Bezemer, [2011](#); Mian & Sufi, [2010](#); Bentolila et al., [2018](#); Bagliano & Morana, [2012](#)). In this regard, flaws in regulation, price of oil, greed and the failure of corporate governance system are considered as its main causes. At the end of 2019, the entire world faced a different type of crisis, that is, COVID-19 which still persists. It is a health issue which spread the fear of death all over the world and caused a global recession.

It was expected initially that the spread of COVID-19 would be localized in China. Later on, it spread all over the world due to the movement of people. Governments of many countries banned travel to their respective countries which affected the tourism and aviation industries the most along with the cancellation of sports events, worldwide. Gatherings of people were banned and the entertainment industry was also badly affected (Larry-Elliot, [2020](#)). Larry-Elliot ([2020](#)) argued that the effect of this crisis will be greater than the Global Financial Crisis 2008-2009. This is because it has affected all those countries which were not significantly affected by the said crisis. According to El-Erian ([2020](#)), this crisis is very destructive because it has created demand and supply shocks in almost all the sectors of the global economy.

The financial sector of the world is also affected badly by the COVID-19 crisis. According to S&P and Dow Jones indices, S&P 500 indices fell by 28% in February 2020 and it has lost 6 trillion dollars. Nikkei fell by 29% and FTSE 100 index fell by 41% during this period (Ozili & Arun, [2020](#)). Besides affecting the macroeconomic figures, this crisis has badly affected the profitability of the banks. The non-performing loans of banks were raised by 250 basis points. It is because the business of loan bearers was facing liquidity crunch. Loans issued to the aviation industry, tour operators, hotels, the retail and real estate sectors, and the construction industry became non-performing. Mostly, these industries are in

stagnation stage and their bearers cannot repay their loans. This ultimately affects the profitability and stability of the banking sector.

The conventional banking system is based on debt while the structure of Islamic banks (IBs) is based on interest-free banking, where the participants earn profit on their investment based on the profit and loss sharing arrangements. Each party in the contract must share the profit as well as the risk of loss. This feature of sharing the risk and profit makes IBs more resilient to any financial crisis. The capital adequacy ratio of IBs is greater, which is the main reason behind the growth of their assets.

The main concern of conventional banks (CBs) is managing the debit and credit of deposits and withdrawals. Secondly, they prefer short-term financing to business firms and individuals, while their Islamic counterparts receive deposits on the basis of profit and loss. The clients depositing money in them become investors instead of creditors. In comparison with CBs, IBs have a higher cash-to-asset ratio and a higher cash-to-deposit ratio. The debt-to-asset ratio of CBs is also greater than that of the IBs. Therefore, they are wide open to a higher liquidity risk as compared to the IBs. The lending practice in IBs is safer than their conventional counterparts because it is based on the participatory mode of financing. Thus, IBs earn profit only when their borrowers make profit. This kind of participatory financing makes them more capable of facing the financial crisis. Therefore, we expected little or no effects of COVID-19 on the financial performance and stability of IBs as compared to CBs.

The objective of this study is to evaluate the impact of COVID-19 on the performance (ROE/ROA) and stability (Z-score) of both Islamic and conventional banks. Due to the structural variation among these banks, it was expected that IBs might be immune from the effects of the crisis. However, the results told a different story. Both the performance variables, that is, ROE and ROA of the IBs and CBs were affected adversely by the COVID-19 at different significance levels, while the stability of both types of banks was not affected. The study enhances the literature regarding the COVID-19 induced financial crisis and the performance of the banks in the GCC region, Malaysia and Pakistan.

The rest of the paper is organized as follows. Section 2 provides empirical literature on the performance of both IBs and CBs during the COVID-19 induced financial crisis. Section 3 provides the data and methodology of the current empirical study. Section 4 provides the results. Section 5 summarizes the study.

Literature Review

The Global Financial Crisis (GFC) 2008-2009 started from the US mortgage market and soon spread to the rest of the world. By the end of 2009, the losses of financial institutions and banks were 4.7 trillion dollars. Literature has explicated different causes of the crisis such as the failure of regulations, greed and the failure of corporate governance mechanism. According to many empirical studies, the performance of IBs was better than CBs during the said crisis. The literature reveals various causes of their better performance.

In comparison with CBs, borrowing from depositors and other banks is prohibited in the IBs which makes these institutions less vulnerable to any financial crisis. Zineldin (1990) compared the practices of both types of banking systems and reported the superiority of IBs over CBs. Empirical studies were conducted in different countries such as Malaysia and Egypt and these studies reported that IBs are comparatively better than CBs as far as performance is concerned. Alqahtani and Mayes (2018) compared 76 CBs and IBs during the crisis period in the Gulf Cooperation Council (GCC) region and reported that small IBs remained more stable than other financial systems. As far as stability is concerned, Cerovic' et al. (2017) compared both types of banking systems and reported that IBs remained more stable and efficient than CBs before, during, and after the crisis. They emphasized the regulation of financial system for the sake of efficiency and stability. Alshammari (2017) reported that the Global Financial Crisis adversely affected the performance of CBs but IBs remained immune from its effects in K.S.A, Kuwait and U.A.E.

According to Mollah et al. (2017), the governance structure of IBs and CBs is different. Using the sample size of 52 IBs and 104 CBs in different countries before, during and after the crisis period, they reported that it is the governance structure of IBs which enables them to perform better than CBs. In the same context, Farooq and Zaheer (2015) reported that the IBs in Pakistan were less exposed to the withdrawal of deposits during the financial crisis than CBs. The same results were presented by Khaskhelly (2015) for the GCC region. She reported that in GCC countries IBs were less affected than CBs due to equity-based financing. The financing of CBs is debt-based, while the financing of IBs is equity-based. The study further reported that the growth rate of IBs is greater than that of CBs.

As far as the efficiency of the banks is concerned, Beck et al. (2013) found that IBs were more efficient than CBs during the crisis period. They further reported that IBs face a smaller risk of failure than CBs due to their higher capitalization. Being *Shariah* compliant, IBs are risk sharing intermediations and they cannot

invest in all those high-risk securities which triggered the financial crisis. However, Bourkhis and Nabi (2013) found no significant difference in terms of stability between CBs and IBs during the crisis. Using the Altman Z-Score model, Rajhi and Hassairi (2013) reported that IBs were more stable in the Middle East, Southeast Asia and North African regions than CBs during the crisis period. Al-Deehani et al. (2015) reported a significantly different performance of CBs and IBs during the crisis. They reported that the liquidity ratios of IBs increased, while there was a decrease in these ratios in CBs during the same period. The profitability, leverage and capital adequacy ratios of IBs and CBs were compared by (Ouerghi, 2014). He found that the performance of large IBs is better than CBs, while the performance of small banks is better than large banks. He argued that due to a lower leverage ratio, IBs have a higher liquidity ratio and a lower risk of insolvency in the crisis period. The profitability of the banks during the period 2006-2009 was reported by (Parashar & Venkatesh 2010). They measured the financial performance of IBs and CBs and reported the better performance of IBs as compared to CBs because of their higher capital adequacy ratio. To meet the organizational obligations, it is very important for an institution to maintain its solvency ratio. Through cross-country analysis, Hasan and Dridi (2011) found that IBs performed better than CBs in terms of asset growth, market growth and solvency ratio.

CBs function as depository institutions and it is their main function, therefore, Dybvig (1983) argued that CBs are at risk, inherently. The money of the depositors is guaranteed and they have to pay their debts on demand. On the contrary, IBs function as investment institutions by collecting equity investments on the basis of a profit and loss sharing system. Therefore, the investment accounts of IBs are not guaranteed similar to the deposits of CBs. Therefore, the risk factor for IBs is much lower than CBs. Thus, IBs performed well and demonstrated their resilient nature while facing various crises in the past.

Based on the previous literature and empirical results, we expected a better performance and stability of IBs as compared to CBs. The underlying reason is that IBs are asset-based and CBs are debt-based. During the COVID-19 pandemic, the prices of assets increased consistently. Hence, we expected little or no effect of the pandemic on the stability and performance of IBs. To our knowledge, this study is the first attempt to gauge the effect of COVID-19 on the performance and stability of both IBs and CBs.

Sample and Methodology

The sample included all the 65 listed banks in the GCC region, Malaysia and Pakistan, of which 21 are Islamic while 44 are conventional banks. The time period

of the study spanned 1st January 2019 to 30th June 2020. Quarterly data were obtained from the published quarterly reports of the banks. The time period of the study is very important because the COVID-19 crisis dates from January 2020 and since then has spread all over the world. Thus, the study covers two quarters of the COVID-19 period because the data was available up to June 2020 at the time of the study, while the data of four quarters of these banks before COVID-19 was included for the sake of comparison. Cross-sectional panel data was used for the estimation of regression following the regression models.

Two ratios including return on assets (ROA) and return on equity (ROE) are used worldwide to evaluate the performance of the banks. The dependent variables used for measuring performance in this study were ROA and ROE. To evaluate the performance, the following models were used:

$$ROA_{it} = \alpha + \beta_1 CI_{it} + \beta_2 CA_{it} + \beta_3 Size_{it} + \beta_4 Inf_{it} + \beta_4 Covid_{it} + \epsilon_{it} \dots \dots \dots (i)$$

$$ROE_{it} = \alpha + \beta_1 CI_{it} + \beta_2 CA_{it} + \beta_3 Size_{it} + \beta_4 Inf_{it} + \beta_4 Covid_{it} + \epsilon_{it} \dots \dots \dots (ii)$$

$$Log Zscore_{it} = \alpha + \beta_1 CI_{it} + \beta_2 CA_{it} + \beta_3 Size_{it} + \beta_4 Inf_{it} + \beta_4 Covid_{it} + \epsilon_{it} \dots \dots \dots (iii)$$

where

ROA= Return on Assets

ROE= Return on Equity

$$LogZscore = \log \text{ of } \frac{ROA_{it} + \left(\frac{EP_{it}}{TA}\right)}{\sigma(ROA_{it})}$$

CI = Ratio of cost to income

CA = Ratio of credit to total asset

Size = Log of total assets

Inf = Inflation rate

COVID = Dummy variable for COVID-19

Results

Table 1 presents the descriptive statistics of the variables for the CBs considered for the analysis. The maximum ROA is 0.043072, while the minimum is -0.025721. The standard deviation of ROA (0.00065) is positively skewed. The standard deviation of ROE is 0.05442, which is negatively skewed. Cost to income ratio is negatively skewed with the standard deviation of 0.2409. Credit to asset ratio is also negatively skewed with the standard deviation of 0.15706. Size, which is defined as the log of total assets, is negatively skewed with a standard deviation of 1.2905. The standard deviation of inflation is 5.115, which shows high deviation. This is because the inflation rate in Pakistan is higher as compared to other

Table 1

Descriptive Statistics

Variable	N	Mean	SE Mean	StDev	Minimum	Median	Maximum	Skewness	Kurtosis
ROA	247	0.00486	0.00042	0.00653	-0.02572	0.00345	0.04307	1.54	10.59
ROE	247	0.03962	0.00346	0.05442	-0.36697	0.03133	0.24650	-1.46	16.64
CI	244	0.4764	0.0154	0.24090	-1.55880	0.44030	1.69990	-1.10	24.43
CA	247	0.7379	0.0100	0.15700	0.00000	0.79186	0.95200	-1.88	5.30
Size	247	7.8270	0.0821	1.29050	3.37200	8.16890	9.53540	-1.72	3.52
Inf	247	2.6930	0.3250	5.11500	-3.41000	0.50000	12.6000	0.84	-0.86
Log Z	247	1.5111	0.0289	0.45370	-3.13350	1.46370	2.40010	-4.01	44.01

Table 2

Summary Statistics for Islamic Banks

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Median	Maximum	Skewness	Kurtosis
ROA	124	0	0.0037	0.0004	0.0048	-0.0164	0.0031	0.0213	0.28	5.57
ROE	124	0	0.0353	0.0041	0.0457	-0.1418	0.0277	0.2581	0.74	6.85
CI	124	0	0.4938	0.0165	0.1841	0.0978	0.5063	1.0292	0.22	-0.31
CA	124	0	0.7255	0.0150	0.1666	0.0728	0.7069	1.8880	2.67	20.84
Size	124	0	7.7259	0.0914	1.0175	4.4716	7.9234	9.1006	-1.33	1.78
Inf	124	0	1.1760	0.3900	4.3390	-3.4100	-0.2000	12.600	1.52	1.06
Log Z	124	0	1.5328	0.0295	0.3281	0.3377	1.4819	2.3828	0.61	1.74

countries included in the study and its skewness is 0.84. The log of Z-score is also negatively skewed with a standard deviation of 0.4537. The overall skewness of the data is between +2 and -2 except the log of Z-score which shows the normality of the data.

Table 2 presents the descriptive statistics of the variables included in the study for the IBs. The standard deviation of all the variables except inflation and total assets is less than 0. The standard deviation of inflation is high as explained in Table 1. The standard deviation of total assets is 1.0175, while the skewness of the variables is between +2 and -2 except the credit to asset ratio which is positively skewed up to 2.67.

Table 3 presents the correlations between the independent and dependent variables of CBs. It shows that ROA is negatively correlated with CI, CA, size and inflation. Similarly, ROE is negatively correlated with CI, CA and inflation, while it is positively correlated with size. The log of Z-score is negatively correlated with CI, CA, size and inflation.

Table 3

Summary Statistics for Conventional Banks

	ROA	ROE	CI	CA	Size	Inf
ROE	0.867					
CI	-0.180	-0.095				
CA	-0.073	-0.048	0.182			
Size	-0.075	0.027	0.069	0.170		
Inf	-0.184	-0.020	0.273	0.263	0.434	
Log Zscore	-0.047	0.027	-0.074	-0.047	-0.023	-0.082

Table 4

Correlations

	ROA	ROE	CI	CA	Inf	Size
ROE	0.887					
CI	-0.302	-0.248				
CA	-0.040	-0.056	0.064			
Inf	-0.005	0.246	0.274	-0.120		
Size	0.160	0.233	-0.075	0.127	0.332	
Log Z	0.015	-0.076	0.199	0.321	-0.051	0.055

Table 4 presents the correlations between dependent and independent variables of the IBs. The ROA of these banks is negatively correlated with CI and CA, while inflation is positively correlated with size. ROE is also negatively correlated with CI and CA and positively correlated with inflation and size.

Table 5 presents the results of the regression models used in the current study.

Table 5

Regressions Results

Coefficients	Conventional Banks			Islamic Banks		
	ROA Model (i)	ROE Model (ii)	Zscore Model (iii)	ROA Model (i)	ROE Model (ii)	Zscore Model (iii)
CI	-0.00399 (0.022)**	-0.0221 (0.141)	-0.097 (0.447)	-0.00762 (0.002)***	-0.0774 (0.001)***	0.022 (0.022)**
CA	-0.00072 (0.825)	-0.0090 (0.750)	-0.223 (0.254)	-0.00101 (0.691)	-0.0041 (0.859)	0.001 (0.001)***
Size	0.00010 (0.766)	0.0024 (0.423)	0.007 (0.789)	0.00075 (0.094)*	0.0060 (0.138)	0.325 (0.325)
Inf	-0.00020 (0.036)**	-0.0002 (0.780)***	-0.004 (0.589)	0.00002 (0.861)	0.0030 (0.003)***	0.493 (0.493)
Covid	-0.00389 (0.000)***	-0.0253 (0.001)***	0.018 (0.772)	-0.00233 (0.008)***	-0.0190 (0.017)**	0.844 (0.844)
Adjusted R ²	10.97%	3.80%	0%	12.8%	18.9%	10.69%

*p<0.10, **p<0.050,
***p<0.01

The results of regression show that the cost to income ratio significantly impacts the ROA of both types of banks. Cost to income ratio also impacts negatively the ROE of the IBs. Credit to asset ratio has no significant impact on the performance variables of these banks. Size of the banks has no significant impact on their performance. Inflation shows different results. The ROA and ROE of CBs are negatively impacted by inflation, while it impacts only the ROE of the IBs.

COVID-19 has a significant negative impact on the ROA and ROE of both types of banks. The ROA and ROE of these banks have been impacted at 1% level of significance. While the ROE of CBs was impacted by COVID-19 at 1% level of significance, the ROE of IBs was impacted at 5% level of significance. On the contrary, there was no significant impact of COVID-19 found on the stability of both conventional and Islamic banks.

Previous literature reported the superior performance of IBs as compared to CBs during the crisis period. However, the results of this study showed that both types of banks have been impacted by COVID-19 at different levels which adds to the existing knowledge.

Conclusion

The COVID-19 pandemic started from China at the end of 2019 and spread to the rest of the world by January 2020. Almost all the countries of the world closed their international borders which affected the various sectors of their economy such as tourism, sports, exports and financial markets. Indeed, financial markets faced huge losses and the economists predicted further losses in the near future if the pandemic continues its spread. This study reported the impact of COVID-19 on the performance and stability of CBs and IBs. The latter performed better than their conventional counterparts during the Global Financial Crisis 2008-2009 due to their participatory mode of banking. However, their performance results are different during COVID-19.

The results of this study showed the negative significant impact of COVID-19 on the performance of CBs as well as IBs. This indicates that this crisis is much more severe than the Global Financial Crisis 2008-2009. It has impacted not only the performance of debt-based CBs but also the performance of the participatory structure of IBs. However, there was found no significant impact of this pandemic on the stability of these banks up to June 2020 in the GCC region, Malaysia and Pakistan.

The current study is limited to the GCC region (Bahrain, K.S.A, Kuwait, Qatar and United Arab Emirates), Malaysia and Pakistan. Specific internal and external

variables were used to measure performance and stability. For further research, some other external variables such as the sociopolitical and legal infrastructure of different countries can be incorporated. Furthermore, the comparison of the efficiency of Islamic and conventional banks during the pandemic will also be beneficial.

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