



The Impact of Islamic Banks on Financial Soundness Indicators

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ABSTRACT

This study aims to determine the impact of Islamic banks on the financial soundness Indicators, considering that these indicators are mirror that reflect the ability of the banking system in absorbing crises and efficiently investing in the operation of the money. This study uses the capital adequacy index as a measurement on indicators of total financial soundness, where the dependent variable is (percentage of Islamic banks, total banks credit, total capital of the banking sector). The study included countries where Islamic banking represents high percentage of total banks, where these countries should publish the relevant data. The study sample represents nine countries around the world. The pool data model used to estimate the impact of Islamic banking, where the methodology used enhanced by using (the pooled time series-cross section analysis) to improve measurement efficiency. The results of the study shows positive impact ratio of Islamic banking on financial soundness indicators represented by the ratio of capital adequacy and the results show that the increase in the percentage of Islamic banking by 1% has the effect of increasing the proportion of capital adequacy by 0.21%.

Keywords: Financial Soundness Indicators, Islamic Banks, Capital Adequacy Ratio, Basel Standards

JEL Classification: E22.G01.G21

1. INTRODUCTION

All the world's economies are trying to enforce financial stability by strengthening the capacity of their banks and financial institutions to cope with risks and reduce negative effects of successive financial, economic and political crises. The best evidence of this was the collapse of traditional banks and the deterioration of financial markets, particularly in the United States of America and Europe, during the recent financial crisis of 2008, to reduce the impact of this crisis and to reduce its future occurrence, many regulators of financial institutions have development of a set of preventive actions and policies based on several financial indicators that have been developed and in depth in the Basel III decisions and the their amendments, The third edition of the 2010 standards focused on the need for the bank to be financially robust through its commitment to several indicators at the bank level, and thus at the macro level of banks and in particular the capital adequacy index, In response, most central banks have developed many financial indicators that reflect the financial robustness of the banking sector and inspired by the relevant international regulations and standards in order

to achieve the financial soundness of banks and then the financial and real economy.

In the last two decades, Islamic banks have proliferated in most countries of the world, especially in Islamic countries, and that's where the questions came from, Does the Islamic banking industry reduce the risk to banks, which is reflected in the indicators of financial robustness in a positive way by improving its capital adequacy? By scanning the events of the recent financial crisis and the ensuing period, we note that Islamic banks are less affected by the crisis than traditional banks, where sometimes Islamic bank perform better These banks have evolved markedly in the world after the crisis. Based on the foregoing, this study aims to:

Growth of Islamic banking assets in recent years around the world. If the Islamic banks have contributed to improving the indicators of the overall financial soundness of the banking sectors in the countries where these banks are located, by examining the impact of Islamic banks on the overall financial soundness indicators (capital adequacy index).

2. LITERATURE REVIEW

2.1. Financial Robustness and Capital Adequacy in Basel I, II, III

The capital adequacy indicator is one of the most important criteria used in the evaluation of commercial and Islamic banks and is considered the most important indicator of total financial robustness (Alhenawi, 1998). This indicator is integrated with the most important criteria used to evaluate banks, including the CAMELS standard, which evaluates banks based on six elements and the first element of these elements is the rate of capital adequacy, interest in capital adequacy has increased for banks since the beginning of the 1970s. The capital adequacy index and indicator is one of the most important indicators and criteria used in the evaluation of commercial and Islamic banks and is considered the most important indicator of total financial robustness. And that as a guarantee to meet the risk and basis for attracting deposits and index to increase the profitability of the bank on the one hand and the index of its stability on the other (Alzaidanein, 1999).

The Basel standards, with its three issuance's and amendments, were an attempt to reduce banking risks and enhance the indicators of financial robustness of these banks by creating a set of standards, Banks must adhere to them and focus on the adequacy of the bank's capital and its ability to absorb the losses and decrease the market value of the bank's assets. It was agreed in Basel I in 1988 that banks were required to have a minimum capital adequacy of 8% so that the bank retains the capital of 8% of the total assets weighted by the risk weights (Mokhtar, 2017).

Basel II maintained the same proportion as the capital adequacy rate of 8%, i.e., the legal capital is 8% (which consists of the principal capital and the supporting capital) Of total assets weighted by risk weights however, the system of weights for asset risk has been modified and loans are no longer classified according to the identity of the borrower (state, enterprises, other banks), rather, they are linked to the degree of rating given to the debt by the global rating institutions and to specific criteria that have been dissociated by the Basel Committee to reflect credit risk, market risk and operational risks.

The indicator of capital adequacy in the Basel III decisions has become more complex. After the global financial crisis in 2008, the new amendments to the Basel III decisions in 2010 focused on changes in market risks, operational risks, improved capital quality and increased capital reserves. So that it improves its quality and strengthens the ability of banks to absorb losses and shocks during a period of financial crisis so that you must add optional reserves estimated at 2.5% and increase the percentage basic capital from 4% to 6% the minimum ratio of capital adequacy as a proportion of weighted assets must be raised from 8% to 10.5% from the beginning of 2019 (Basel III, 2010).

Through the previous presentation of the Basel standards, they have focused on the capital adequacy index and have committed banks to apply it as an indicator of the bank's resilience and crisis capacity. This is indicated by several studies, including a study

(Aries and Bahoussi, 2017), a study (Abdelkader and Gheraia, 2015) and a study (Mokhtar, 2017) and study (Alghandor and AlTohami, 2010) and study (Alfawwaz and AlRqibat, 2015), all of these studies were aimed measure the impact of the Basel amendments during their three policies on bank stability. The studies found a positive impact between the banks' obligation to meet the Basel standards and their ability to cope with the crises, in particular the amendments made under the Basel III version.

2.2. Financial Strength of Islamic Banks

After the financial crisis in 2008, attention has been directed towards Islamic banks because of their low vulnerability to the global financial crisis compared to conventional banks, which gave an indication of the strength of these banks. There are many studies that dealt with the efficiency and durability of Islamic banks compared to traditional banks he made this study (Rahman, 2012) to find out whether there is a difference between the financial stability of Islamic banks compared with traditional banks in Malaysia. The study included a sample of 38 Malaysian banks, including 17 Islamic banks and 21 conventional banks from 2005 to 2010; the study uses a z-score model to measure stability as well as a model that reflects the risk of banks. The variable is banking stability, independent variables, and ratio of loans to assets, margin ratio, total assets, the financial market index, inflation rate and gross domestic product. With Islamic banks higher than conventional banks and that the credit risk associated with conventional banks is higher than Islamic banks and therefore Islamic banks have a positive impact on economic and financial.

Study (Gamaginta and Rokhim, 2011) aimed to determine the stability of Islamic banking compared to conventional banks in Indonesia (applied study). The researcher obtained the degree of banking stability using the z-score and t-test models. The researcher used a sample of 12 Islamic banks And 71 conventional banks in Indonesia from 2004 to 2009, and the researcher divided the Islamic banks and conventional banks into small banks and large banks, and after extracting the value of the model z-score model and test t-test and found that the stability of banks in Islamic banks is smaller than banking stability in Islamic banks Beer compared with conventional banks and Islamic banks generally enjoy a higher degree of stability of conventional banks, but the researcher did not link the results of stability indicators. College to see how Islamic banks are influenced by external circumstances and the extent of the contribution of Islamic banks in achieving macroeconomic stability, banking ability.

The study (Cihak, 2008) aims at measuring the financial stability of Islamic banks compared to conventional banks around the world. The researcher considered that banking stability is the bank's failure to risk future bankruptcy. The best measure of measuring banking stability is the z-score model, which shows financial safety. Thus, the researcher built a model for measuring banking stability based on the z-score model, which is composed of several factors, including the bank itself, including the financial sector, which reflects the economic situation so that the model reflects the extent of the bank's vulnerability to the surrounding conditions. The study sample included eighteen banking systems around the world. The researchers divided Islamic and conventional banks

into two types of small banks and large banks. The researcher concluded that small Islamic banks are more stable than large Islamic banks. Small Islamic banks are more stable than small commercial banks.

3. STUDY DATA

Islamic banks have been operating almost 40 years since 1975, and now Islamic banking has been established in more than 70 countries and more than 650 banking institutions as well as Takaful investment institutions around the world. The assets of Islamic banks and Islamic financial institutions by the end of 2015 were more than 2.3 trillion Dollar and Islamic banking growth over the past 10 years doubles every 5 years (World Islamic Banking Competitiveness Report, 2016) Islamic banking volume is expected to jump by \$ 4 trillion by 2020, After conducting research and study for all countries in the world where there are Islamic banks and these banks have assets that constitute a tangible percentage that can be used for research purposes and can be relied on in the analysis.

And refer to the financial stability reports of the Islamic financial industry issued by the Islamic Financial Services Council (IFSB, 2014-2017) Many countries with Islamic banks have assets that represent a significant proportion of the total assets of the banking sector as a whole, The ratio of assets of Islamic banks accounted for 100% of total banking assets in Iran, Sudan, 40-60% in (Brunei, Saudi Arabia), 30-40% in (Yaman) and 20-30% in (Qatar, Malaysia, Bangladesh, UAE) and 10-20% in (Djibouti, Jordan, Barain, Pakistan), 5-10% in (Egypt, Oman, Turkey, Indonesia) and <5% in (Tunisia, Algeria, South Africa, Srilanka, Thailand, Lebanon, Nigeria, UK, Singapore, Mauritius).

In countries where the banking industry is 100% excluded because it is impossible to compare, also we exclude countries where Islamic banking accounts for <5%. After reviewing data published by the International Monetary Fund (IMF) on the published data of global financial soundness indicators, For banks in countries that constitute Islamic banks from 5% to 50% of total banking assets, the necessary data were obtained from the Islamic banking ratio, the total financial strength, the total assets of the banking sector, the size of the total banking capital, credit facilities provided by the banking sector the countries to be covered by the study were listed in the following countries: Jordan, Kuwait, Pakistan, Oman, Turkey, Indonesia, Saudi Arabia, Qatar, Malaysia, UAE. (Saudi Arabian monetary Authority, Central Bank of the UAE, Central bank of the Republic of turkey, Central Bank of Malaysia, Qatar Central Bank, Central Bank of Kuwait, Bank Indonesia, Central Bank of Jordan, State Bank of Pakistan, International Monetary Fund, 2012-2016)

3.1. Total Capital Adequacy Ratio

The total capital adequacy ratio declared in the financial and banking stability reports issued by the central banks of the countries studied by the IMF was considered as a dependent variable on the basis that the capital adequacy index is the primary indicator of the overall financial strength of the banking sector as a whole. Capital adequacy ratio according to agreed Basel standards. The Table 1 shows the total capital adequacy ratio of the banking sector in countries.

3.2. The Percentage of Islamic Banking

The Islamic banking ratio is calculated by dividing the assets owned by the Islamic banks on the total number of assets owned by the banking sector within the country of the study society. The Islamic banking ratio of the study society, as well as the percentage of Islamic banking following Table 2.

Table 3 shows the total assets of conventional and Islamic banking institutions during the study period for the countries of the study population:

3.3. Total Credit Facilities for the Banking Sector

Table 4 shows the total facilities granted by traditional and Islamic banking institutions study period for countries study population.

3.4. Total Capital of the Banking Sector

Table 5 shows the total capital to traditional and Islamic banking institutions during the study period.

4. THE MODEL AND IMPERIAL RESULT

4.1. The Model

$$Y_{it} = \beta_{0i} + \beta_{1i}x_{2it} + \beta_{2i}x_{3it} + \beta_{3i}x_{3it} \quad (1)$$

Where Y_{it} capital adequacy ratio for the entire banking sector for each country during the study period, x_{3it} : Total credit facilities for the banking sector of the country during the study period, x_{2it} : The ratio of Islamic banking to the state during the study period, x_{3it} : Total capital of the state banking sector during the study period.

4.2. Methodology of Analysis

The nature of the data imposed the appropriate models of estimation, where the pool data model was used to estimate the effect of Islamic banking and uses the method of analyzing the data of the Pooled (time series - cross section) analysis to improve measurement efficiency. This type of estimation is more general and leads to better results of the estimate and provides the opportunity to conduct several statistical tests of the various hypotheses and the results were extracted using statistical packages E- views.

The addition of individual effects and/or time effects in the formulation of the same model is achieved through the so-called fixed effects, and can be included as random components through random effects. The two methods are usually used together in applied studies. The Pool Data equation can be expressed in the following simple formula:

$$y_{it} = \alpha + x_{it} + \gamma_t + \delta_{it} + \epsilon_{it} \quad (2)$$

Where y_{it} is the dependent variable (capital adequacy), and x_{it} expresses the independent variables (X_{1i} : Islamic banking ratio in country i , X_{2i} , total state credit facilities in country i , X_{3i} : Total capital in country (i), and ϵ_{it} expresses the random mistake of each of sectional data for (Jordan, Kuwait, Pakistan, Oman, Turkey, Indonesia Saudi Arabia, Qatar, Malaysia, UAE) ($i = 1, 2, \dots, N$) and annual data ($t = 1, 2, \dots, t$), and α for the fixed variable. They express the specific effect of both cross-sectional and annual data (whether fixed or random effect).

Table 1: Total capital adequacy ratio

Country	2011 (%)	2012 (%)	2013 (%)	2014 (%)	2015 (%)	2016 (%)
Jordan	19.30	19.01	18.39	18.40	19.06	18.50
Pakistan	14.60	15.40	14.90	17.10	17.30	16.20
Kuwait	18.50	18.20	18.80	16.90	17.50	18.60
Qatar	20.60	18.90	16	15.98	14.99	15.76
Indonesia	16.10	17.30	19.80	18.70	21.30	22.70
Turkey	16.60	17.90	15.30	16.30	15.60	15.70
Malaysia	17.70	17.60	14.60	15.40	16.30	15.50
UAE	20.10	20.60	19.30	18.10	18.30	18.90
Saudi Arabia	14.60	15.40	14.90	17.10	17.30	16.20

Source: Data obtained from the IMF website in addition to financial stability reports issued by the central banks of the countries of the study society: IMF. SAMA. CBRT. CBJ. CBUAE. SBP. CBM. CBK. QCP.BI., FROM 2011 TO 2017.

Table 2: The percentage of Islamic banking

Country	2011 (%)	2012 (%)	2013 (%)	2014 (%)	2015 (%)	2016 (%)
Jordan	13.20	13.93	14.10	14.27	15.11	15.30
Pakistan	5.65	7.60	9.50	10	10.40	10.30
Kuwait	38.20	38	38.20	38.30	38.40	38.70
Qatar	23.10	23.77	23.89	25.76	27.20	29.29
Indonesia	3.90	4.60	5.50	4	4.70	5.20
Turkey	4.90	5.60	5.90	6	5.50	5.60
Malaysia	18.30	20	20.70	21	21.30	21
UAE	16.67	17	21.60	21.40	22	22.40
Saudi Arabia	49.60	53	48.90	51	51.20	51

Source: The researcher extracted from the division of the total assets of Islamic banks on the total assets of the banking sector for each country, and data were obtained through the consolidated budgets of banks issued by the central banks of the countries of the study society: SAMA. CBRT. CBJ. CBUAE. SBP. CBM. CBK. QCP.BI., FROM 2011 TO 2017

Table 3: Total assets of the banking sector (billion dollars)

Country	2011	2012	2013	2014	2015	2016
Jordan	51	53	57	61	64	68
Pakistan	73	80	96	107	126	143
Kuwait	144	154	169	182	192	198
Qatar	192	225	252	278	308	349
Indonesia	270	315	366	415	453	468
Turkey	345	389	491	566	669	775
Malaysia	395	424	456	502	525	545
UAE	476	501	549	618	660	693
Saudi Arabia	397	439	490	546	590	606

Source: Data obtained through the consolidated budgets of banks issued by the central banks of the countries of the study society: SAMA. CBRT. CBJ. CBUAE. SBP. CBM. CBK. QCP.BI., FROM 2011 TO 2017

Table 4: Total credit facilities for the banking sector (billion dollars)

Country	2011	2012	2013	2014	2015	2016
Jordan	21	24	26	28	30	32
Pakistan	36	40	43	47	51	57
Kuwait	98	101	107	112	121	129
Qatar	111	140	159	180	207	232
Indonesia	165	212	254	285	308	328
Turkey	209	242	319	378	451	531
Malaysia	223	246	273	298	322	339
UAE	369	395	434	464	486	516
Saudi Arabia	242	318	345	356	385	395

Source: The data was obtained through the consolidated budgets of the banks issued by the central banks of the study countries: SAMA. CBRT. CBJ. CBUAE. SBP. CBM. CBK. QCP.BI., FROM 2011 TO 2017

4.2.1. Fixed effect model

Assume that differences across states are expressed by differences in the (constant) section. In this type of model, partial slope parameters are restricted to equal across the different countries,

while differences in the single section remain constant. One of the advantages of a fixed effect is that it allows for a correlation between the special effect of countries and independent variables. However, the main disadvantage of using it is the loss of degrees of freedom in the number of CT data due to the use of dummy variables in the number of CTs or the number of years or both.

4.1.2. Random effect model

The random effects model is valid if the differences between countries are shown to represent a structural shift of the regression equations. However, in the latter context, it may be more appropriate if individual effect are seen as randomly distributed across countries.

4.1.3. Choose fixed or random models

This test is based on the assumption that there is no correlation, the normal OLS with the Dummy Variable (LSDV) and the GLS are stable but GLS is efficient. The alternative assumption assumes that OLS is stable and appropriate but GLS is unstable and biased. That is, it measures whether the variance of the OLS estimate for GLS is equal to zero. Based on the value of X², we reject or accept the null hypothesis.

4.3. Model Equation Estimation

All the equations referred to above were estimated using the least squares method, taking into account the partial and total tests, the explanatory force, the absence of economic problems, and their consistency with the economic theory, to estimate the equation of the model. The Hausman test as shown in Table 6, show that the value of X² is high and the probability value is low (<5%).

This means rejecting the null hypothesis of H₀ that assumes that the random effect is stable and effective and accepting the

Table 5: Total capital of the banking sector (billion dollars)

Country	2011	2012	2013	2014	2015	2016
Jordan	3	4	7	8	8	9
Pakistan	7	8	9	10	12	13
Kuwait	21	26	29	32	32	32
Qatar	25	29	32	34	36	39
Indonesia	30	39	46	53	62	71
Turkey	45	56	63	77	87	98
Malaysia	35	40	44	50	55	60
UAE	77	80	83	88	96	103
Saudi Arabia	56	62	67	74	80	86

Source: The data was obtained through the consolidated budgets of the banks issued by the central banks of the study countries: SAMA. CBRT. CBJ. CBUAE. SBP. CBM. CBK. QCP.BI., FROM 2011 TO 2017

Table 6: Hausman test

Test	Test χ^2	P
Fixed effect versus random effect	17.5	0.04

Table 7: Variable: Capital adequacy ratio

Variables	Parameters	SD	t-test	P
log (X1)	0.21	0.106	2.00	0.051
log (X2)	-0.02	0.006	-3.403	0.001
log (X3)	-0.07	0.014	-4.981	0.000
C	-0.99	0.267	-3.729	0.000
R ² =0.78	F-statistic=13.6		P (F-statistic)=0.00000	

X1i: Islamic Banking Ratio in country i, X2i: Total Credit Facilities in country i, X3i: Total bank Capital in country i. SD: Standard deviation

alternative hypothesis H_a which assumes that the constant effect is stable. That is, the Hausman test indicates that the constant effect is statistically accepted.

The results of the estimating model showed (Table 7) a positive significant relationship between the capital adequacy ratio and Islamic banking. The increase in Islamic banking by 1% leads to an increase in the capital adequacy ratio by 0.21% and significant with both the total credit facilities of the state and the total capital.

Significance and explanatory power of the model show that the model as a whole is statistically acceptable with a statistical value of F (13.6) and a P = 0.000 which means that the model is acceptable as a whole. The explanatory power R² is 78%, this ratio is high.

5. CONCLUSIONS AND RECOMMENDATIONS

The financial and statistical indicators show positive relation between Islamic banking and financial soundness indicators represented in the capital adequacy ratio. The study model show that the rise of Islamic banking by 1% leads to an increase in the capital adequacy ratio by 0.21%. This is because Islamic banks are more conservative of the conventional banks in the lending and operating policy of their funds. It requires that the grant operations be linked to the existence of a real asset, which constitutes a guarantee and thus a reduction in the risks of the bank facilities. In addition, Islamic banks adhere to the standards and controls of the

traditional banks' Central banks and international standards such as Basel standards, as well as compliance with special standards issued by Islamic regulators such as the Islamic Financial Services Board (IFSB) standards, In addition to its commitment to work regulations derived from Islamic sharia.

The study recommends facilitating the procedures related to the development and activity of these banks around the world and the creation of special standards for Islamic banks that are consistent with the nature of their activities because of the different contractual relationship between them and depositors and borrowers compared to conventional banks.

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