Impact Of Basel III Standards Compliance on Financial Performance - Comparative Analysis of Islamic & Conventional Banks in Malaysia

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ABSTRACT

This study aims to empirically evaluate the financial performance of Islamic and conventional banks and the effects of Basel-III capital standards and regulations upon the banking environment of Malaysia on a sample of 16 Islamic Banks and 16 Conventional Banks in Malaysia. We deployed banklevel data of top Banks operating in Malaysia for the post-financial-crisis period, i.e., from 2008 to 2017. The assessment of financial performance was made by deploying internal factors based on Banks earning ROA, i.e. (Return on Assets) and indicators that are based on Market measures, i.e., Tobin's Q ratio (Price/Book Ratio). Regression analysis is employed to measure the effect of Bank specific variables like credit risk, bank size, operational effectiveness, Capital adequacy ratio, and management of assets on the two performance indicators. Further, the model is run by using a dummy' control' variable to take control over the Basel III standards implications. The results envisage that compared to the external-based performance model, the explanatory power of the performance indicators based on the internal model is significantly higher. Moreover, and to no surprise, results further showed the sensitivity of the Islamic banking environment's performance to Basel-III regulations. It is recommended that these studies prove highly beneficial to participants of capital-market who seek interest in the Islamic financial industry, particularly in the Asian region. Additionally, it also provided valuable feedback for the Management of Banks, and on the academic front, it opened doors for further research on the Islamic banking Industry.

Keywords: Islamic banks, Basel III standards, Bank Specific Variables, Tobin's Q.

Abbas et al., INTRODUCTION

Islamic banks have taken a significant position in the financial sector and play roles somewhat like conventional banks except for a fundamental difference in the model. The conventional banking system is mainly debtbased practice that works on the debtor-creditor relationship between the depositor and bank and between the bank and the borrower. The money, as a commodity, is traded, where the banks charge interest and make a profit. On the other hand, the Islamic bank is asset-based, where the money only performs the function of a medium of exchange under the risk-sharing model. In Islamic finance, Riba is illegal and forbidden. Resultantly, Islamic banks work under four main Islamic modes of financing, such as Mudaraba, Ijara, Musharaka, and Murabaha (Haron, 2000); (Suleiman, 2000); (Schaik, 2001).

In the context of the financial crisis, Islamic banks in comparison with conventional banks, it was argued that the magnitude of the global crisis would not have been as much if these had been operated under the Islamic modes of financing as the factors which gave rise to such crisis are not allowed in Islamic mode of financing (Hamdan, 2009). The financial crisis has induced traditional banking to focus on the Islamic mode of banking (Wilson, 2009). To study the influence of Basel III upon the financial performance of banks. We measured two-way financial performance using ROA (Return on Assets, for internal evaluation) and Tobin's Q (external / market-based evaluation). Regression analysis was run to capture the impact of asset management, operational efficiency, credit risk, bank size, and capital adequacy ratio upon financial performance was developed.

The study is conducted in Malaysia because it is one of the leading Islamic countries where the number of Islamic banks is increasing at a higher rate but not in a monopolistic situation, e.g., Iran. Islamic banks of Malaysia also offer an attractive range of services (Wilson, 2009). Ernst & Young's reflected in its World Islamic Banking Competitiveness Report 2016, the sound growth in asset increasing of Shariah-Compliant Islamic countries was 18% annually. In contrast, Worldwide, Islamic banking assets have crossed \$1.3 trillion. At a glance, Islamic banking assets in Saudi Arabia, UAE, Qatar, and Turkey have been increased by \$801 billion by 2015, comprising around 62% of international Islamic banking assets.

Our study has investigated the working of 14 Islamic Banks and 14conventional banks operating in Malaysia. It is believed that this study is one of the few to find out the repercussions of Basel III regulations for the Malaysian banking sector. The outcomes of the study are fruitful for participants of the capital market by attracting their interest in the banking sector of the Malaysian region. Since the applicability of the Basel-III standards will be at its optimum level until 2019, the study findings may encourage the banks in earlier adoption and compliance.

BASEL III- STANDARDS OF CAPITAL AND LIQUIDITY

The Committee on Basel-III declared its endorsement in 2013 with full applicability in 2019, and the standards are based on Basel-I and Basel-II regulatory structure. The implication of Basel-III is claimed to ensure more liquidity and capital with reduced risk and strengthening the banking sector to be an absorbent of economic and financial shocks, improved governance, risk management, and transparency in disclosures. Basel III is characterized by restrictive capital definition, quality standards of capital, and improved minimum capital ratios to enable the banks to use build-up capital in the boom period to overcome the cyclicality of financial markets. As well as, Basel III introduced improved liquidity standards with the inclusion of two indicators, i.e., LCR (Liquidity Coverage Ratio), NSFR (Net Stable Funding Ratio).

The developments will increase more likely decline profitability (ROE) and will entail modification of Statement of Financial Position of banks by limiting non-liquid assets, restricting volatility regarding various sources of funding, and managing the increased cost of funding. The standards will entail banks to modify the existing business model, achieve upgraded stress testing, changes in capital management, and reduce counterparty risk. A study by Stubing (2011) pointed out the same about GCC banks: they are ready to comply with a standard of Basel III as these banks are already working with strengthened capital adequacy ratios above 10% with an industry average of 15%. Following are the proposed changes in the capital structures of banks proposed by Basel III across the globe.

2019			
	Common Capital	Capital	Total
	(Post Deduction)	Tier I	Capital
Minimum	4.50%	6.00%	8.00%
Capital Conversation Buffer	2.50%		
Minimum Plus Capital Conservation Buffer	7.00%	8.50%	10.50%
Counter Cyclical Buffer	0-2.5%		
Maximum			13.00%

 Table 1- The revised Basel III Standards regarding Capital to be met by January

 2010

LITERATURE REVIEW

Numerous studies have supported the stability of Islamic banking with reduced fluctuation in economic issues and rates of returns compared with

Abbas et al.,

conventional banks (Cihak & Hesse, 2010). Data Envelopment analysis is widely used to measure the performance of the banking industry (Ramanathan, 2007). This technique is simplified in an application and generates an optimum output level. Other studies have considered financial ratios for comparison without focusing on whether it is an Islamic or conventional bank. (Essayyad & Madani, 2003); (Olson & Zoubi, 2008); (Parashar & Venkatesh, 2010). Olson and Zoubi (2008) investigated the difference of financial ratios of Islamic and conventional banks and considered 16 rations by using the logit, K-means nearest neighbors and neural networks as if such ratios produce reliable results or otherwise and found that liquidity ratios, efficiency, and profitability ratios are better indicators specifically in GCC region.

Parashar and Venkatesh (2010) compared Islamic with conventional banks in GCC countries with the ratio analysis for the period before the financial crisis of 2008 and during the crisis. This study included the six different ratios of five banks. The study supported that the conventional banks were affected to a greater extent during the financial crisis than the Islamic banks when we compared the outcome of liquidity and returned on assets while the Islamic banks suffered more in capital, return on equity, and leverage ratio. Hasan and Dridi (2010) investigated how the financial crisis affected asset and credit growth, profitability, and external ratings in the countries with the considerable contribution of both the conventional and Islamic banks and the countries were Kuwait, Oatar, Jordan, Bahrain, UAE, Turkey, and Saudi Arabia. The findings revealed that the Islamic banking factors contributed to limiting the negative influence on the profitability in the year 2008; however, weak risk management of Islamic banks declined the profitability in 2009. It was also evident that Islamic banks reflected strong credit and asset growth. Hasan and Dridi (2010) commented about asset and credit growth in such a way that it predicted an increase in market capitalization of Islamic banks and further the contribution of Islamic banks in macroeconomic stability.

Beck et al. (2010) measured business model indicators, i.e., asset quality, efficiency, and stability of Islamic and conventional banks by taking a sample of 2900 banks of both kinds from 141 countries around the world, wherein the actual focus was on 20 countries. The performance was compared in the context of pre-crisis scenario and during the crisis, i.e., from 1995 to 2007 and 2008 to 2010 respectively, and found the effect of the crisis on both types of banks. Further, it was also found that during 2005 to 2010, Islamic banks had higher liquidity reserves and capitalization, and the liquidity was further increased during the financial crisis Islamic banks were found to be cost-effective in countries where they had large samples; however, the conventional banks were found cost-effective where both types of banks have significant market capitalization.

Abbas et al.,

Recent studies conducted retrospective analysis of financial ratios by using the accounting data and revealed the need for out of box performance analysis by taking into account profitability and associated risk (Siddiqui & Shoaib, 2011); (Dawood, 2014); and (Lipunga, 2014). Al-Karim and Alam (2013) conducted a study by including five banks from Bangladesh and measured their internal performance taking into account the ROA and Tobin Q for market-based performance and economic performance by using economic value addition. The sample consists of five years data from 2008 to 2012 and the impact of asset management, bank size, credit risk, and operational efficiency. The study indicated that ROA was affected 91%, economic value addition 61%, and Tobin Q's ratio was affected 31%.

Dawood (2014) evaluated 23 commercial banks of Pakistan for 2009 to 2012 in terms of liquidity, bank size, capital adequacy, and cost efficiency and its impact on profitability like all other traditional studies. The study extracted that the profitability is decided by such variables as indicated above. Rahman et al. (2015) did a panel analysis of commercial banks in Bangladesh by taking 30 as a sample of Bangladesh over the period of five years, i.e., 2008 to 2012. They studied the association of risk-taking behavior and regulatory capital with bank size. Empirical findings showed the significant negative association between risk and regulatory capital ratios, which stated that these ratios effectively decline risk. Further bank size was found to have a negative association with bank capital but a positive association with risk-taking. The study concluded that large banks take higher risks but hold less capital, so extra effort is required to increase capital ratios to decrease risk-taking. It was also evidenced that the banks with high liquidity ratios held lower capital ratios and took less risk.

Ashraf et al. (2016a) also used panel data and analyzed 21 commercial banks of Pakistan for eight years, i.e., from 2005 to 2012, to find the association of risk-based capital standards with portfolio risk of assets. The relationship was based on capital adequacy ratio, regulatory measures, risk-weighted assets to total assets, and bank assets portfolio risk, the study of which supported the traditional findings that positive association (BSS) and capital standards.

Ashraf et al. (2016) analyzed if banks avoid the dividend payments in the presence of capital standards that are either stringent risk-based or the common equity-based. The study sample consisted of 8689 banks from 58 different countries and the period of the study was 1998 to 2007 in a Pre-Crisis scenario and from 2008 to 2012 in a post-crisis scenario. Findings extracted that common equity-based capital regulation restricted dividend payments by restricting new sources of capital for banks, and on the other hand, more stringent risk-based capital standards motivated the banks to retain profits to coup with standards of regulatory capital. The outcomes demonstrated that capital regulations might be beneficial in limiting dividend

Abbas et al.,

payments in the boom compared to the period of crisis. Ashraf et al. (2016) further claimed that the regulators could play the role of limiting banks' options in raising new capital from the source which is not common-equity based and by the imposition of inflexible capital regulations, thus by restricting banks from the higher outflow of dividends in boom and using blanket restrictions on sector-wise dividend during crisis-periods.

The above debate supported strong association and linkages of external and internal elements with banks' profitability. However, the banking environment in Malaysia requires further analysis to reach a logical conclusion which is the foundation stone of such study as we have done an empirical evaluation of the banking environment in Malaysia (both Islamic and conventional) in the pre and post scenario of application of Basel-III standards, whereas data from 28 banks (14 Islamic + 14 Conventional Banks) operating in Malaysia for ten years, i.e., from 2008 to 2017 (postfinancial crisis scenario).

RESEARCH METHODOLOGY

This study deploys a data set of 28 significant banks comprising 14 conventional and 14 Islamic Banks conducting business in Malaysia. A most recent and comprehensive data set is employed as a sample obtained from these banks' websites, encompassing annual cross-sectional 140 observations ranging from 2008 to 2017. As we are focusing on the Malaysian Banking sector and other countries, financial analysis is beyond the scope of this research. We have structured the model by deploying cross-sectional penal data of 14 Islamic and 14 conventional banks operating in Malaysia. As a central bank of the country and regulator of banking sector activities, financial integration and harmonization steps taken by the Central Bank of Malaysia, i.e., Bank Negara Malaysia, have had a dominant impact on the performance and efficiency of financial institutions. The same had been complemented by the World Bank reports remarking Malaysian Islamic Banks as key players and a significant portion of Islamic Banking Industry of world.

The data set employed in this research is derived from the Malaysian stock markets' reports and final reports of the banks. Key financial indicators were obtained from the annual reports of banks, which enabled us to gauge that it (Tobin's Q) is used to measure compliance effect, upon both working models of banks (Islamic and conventional), of Basel-III, for which robust regression analysis is used. Capital adequacy ratio, operational efficiency, risk of nonperforming loans, bank size, and management of assets are taken to measure its impact on financial performance in the parameters mentioned above. For an effective forecast of financial performance, a regression model, which was good-fit, was formed for the banking sector performing in Malaysia.

The models (1) and (2) are:

 $ROA_{it} = \beta 0 + \beta 1BankSize_{it} + \beta 2CreditRisk_{it} + \beta 3OperationalEfficiency_{it} + \beta 4AssetManagement_{it} + \beta 5Cap. Adq.ratio_{it} + \varepsilon_{it}$ (1)

Tobin's $Q_{it} = \beta 0 + \beta 1 BankSize_{it} + \beta 2 CreditRisk_{it} + \beta 3 OperationalEfficiency_{it} + \beta 4 AssetManagement_{it} + \beta 5 Cap. Adq.ratio_{it} + \varepsilon_{it}$ (2)

A dummy variable named as "BASEL" is used to ascertain the implications of Basel-III with value of "0" for observations from (2008 to 2013) and "1" for observations from (2013 to 2017). Therefore, Models -1 and 2 are respectively restated and modified as under as Model 3 and Model 4:

 $ROA_{it} = \beta 0 + \beta 1Bank Size_{it} + \beta 2Credit Risk_{it} + \beta 3Operational Efficiency_{it} + \beta 4Asset Management_{it} + \beta 5Credit Risk_{it} + \beta 6BASELD[0,1] + \varepsilon_{it}$ (3)

 $Tobin's Q_{it} = \beta 0 + \beta 1Bank Size_{it} + \beta 2Credit Risk_{it} + \beta 3Operational$ $Efficiency_{it} + \beta 4Asset Management_{it} + \beta 5Credit Risk_{it} + \beta 6BASELD[0,1] + \varepsilon_{it}$ (4)

Ordinary least squares (OLS) technique is used for estimating all models and the coefficients. For heteroscedasticity, White's test (1980) and for Multicollinearity Pair-wise correlation was used.

Conventional Banks	AM	BS	CR	CAR	OE
AM	1				
BS	0.6573	1			
CR	0.3331	0.5755	1		
CAR	-0.4284	-0.4671	-0.6329	1	
OE	-0.1514	-0.1597	-0.3547	0.1230	1

Table 2- Conventional Banks Correlation among variables

The table mentioned above illustrates pair wise correlation among the variables of the conventional banks. As evident from the above table, the correlation of Bank size with Asset Management and Credit Risk and Capital Adequacy Ratio and Credit Risk is higher, therefore to ensure that the problem of Multicollinearity does not exist, VIF test is conducted, results are as under.

Table 3- VIF Table for Conventional Banks Variance Inflation Factors

Varibale	Cofficient Variance	Centered Variance			
С	6.86E-06				
OE	3.84E-06	1.1886			
AM	4.06E-08	1.9256			
BS	1.39E-07	2.3819			

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CAR 2.34E-09 1.8812					
CR	1.25E-07	2.3970			

The results envisaged clearly that values are below 10 so the Multicollinearity doesn't exist.

Islamic Banks	AM2	LGBS	CAR	CR	OE
AM2	1				
LGBS	0.1450	1			
CAR	0.1230	0.4229	1		
CR	-0.3547	-0.5370	-0.6450	1	
OE	0.0998	-0.1450	0.1450	-0.3311	1

Table 4- Islamic Banks Correlation among variables

The results of pair-wise correlation revealed a high correlation between Capital Adequacy Ratio and Credit Risk, and Asset Management and Operational Efficiency, so the VIF results for detection of Multicollinearity applied, the results of which are tabulated below, which reflect the nonexistence of Multicollinearity.

Table 5- VIF Table for Islamic Banks

Variance Inflation Factors

Variable	Coefficient Variance	Centered Variance
С	6.86E-06	
OE	3.84E-06	1.117254
АМ	4.06E-08	1.915176
BS	1.39E-07	2.335756
CAR	2.34E-09	1.893491
CR	1.25E-07	2.537342

RESULTS

Conventional Banks Results

Table 6-

Dependent Variable: ROA

Method: Panel Least Squares

Sample: 2008 2017

Periods included: 10

Cross-sections included: 16

Total panel (unbalanced) observations: 160

Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	21.9183	3.2615	6.7202	0
AM	1.9117	0.2093	9.1321	0
BS	-2.3414	0.3800	-6.1603	0

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CAR	-0.0584	0.0642	-0.9099	0.3646	
CR	-0.7672	0.3734	-2.0543	0.042	
OE	-0.0353	2.1025	-0.0167	0.9866	
DUMMY	2.3038	0.8267	2.7864	0.0062	
R-squared	0.8988	Mean de	ependent var	12.3159	
Adjusted R-squared	0.7748	S.D. de	pendent var	3.7350	

Table 7-

Dependent Variable: Tobin (Q
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Sample: 2008 2017

Periods included: 10

Cross-sections included: 16

Total panel (unbalanced) observations: 152

Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	0.0337	0.0048	6.9028	0
AM	0.0016	0.0002	8.0708	0
LGBS	-0.0132	0.0024	-5.3194	0
CAR	-0.0001	6.21E-05	-1.8082	0.073
CR	-0.0010	0.0003	-2.8521	0.0051
OE	6.94E-05	0.0020	0.0340	0.9729
DUMMY	0.0018	0.0008	2.2533	0.026
R-squared	0.6768	Mean dependent var		0.0123
Adjusted R-squared	0.6517	S.D. dependent var		0.0035

As evident from table 1 & 2 above, findings of Internal-based performance indicators, i.e., ROA has shown significant explanatory power as Asset Management (AM), and bank size (B.S.) are substantial and positive; however, the Credit Risk and Capital Adequacy Ratio was found with the negative association which was insignificant for CAR and significant for C.R. Similarly operational efficiency (O.E.) is also found with an insignificant and negative association. The findings of market-based performance evaluation indicators showed a sufficient explanatory power of the changes in Tobin's Q, i.e., asset management and bank size are also positive and significant (at 5% level). In contrast, the credit risk (C.R.) and operational efficiency (O.E.) are negative and insignificant.

Islamic Bank's Results Table 8-

Dependent Variable: ROA

Method: Panel Least Squares Sample: 2008 2017 Periods included: 10

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Cross-sections included: 16

Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	0.0217	0.0031	6.8617	0
AM	0.0016	0.0002	7.9751	0
BS	-0.001	0.0003	-5.2153	0
CAR	-0.0001	6.25E-05	-1.9660	0.0515
CR	-0.0009	0.0004	-2.7369	0.0071
OE	7.51E-06	0.0020	0.0036	0.9971
DUMMY	0.0018	0.0008	2.3193	0.022
R-squared	0.7731	Mean dependent var		0.0123
Adjusted R-squared	0.7478	S.D. dependent var		0.0035

Total panel (unbalanced) observations: 158

Table 9-

Dependent Variable: 7	Fobin Q			
Method: Panel Least Sc	luares			
Sample: 2008 2017				
Periods included: 10				
Cross-sections included	1: 16			
Total panel (unbalanced	1) observations: 158			
Variable	Coefficient S	Std. Error	t-Statistic	Prob.
С	42.22521	5.815314	7.261036	0
AM	0.63325	0.244674	2.588137	0.0108
LGBS	-8.06855	2.973691	-2.713311	0.0076
CAR	0.007689	0.073994	0.103916	0.9174
CR	-1.32222	0.426671	-3.098929	0.0024
OE	-9.1483	2.42682	-3.769666	0.0003
DUMMY	-0.81275	0.955573	-0.850539	0.3967
R-squared	0.516552	Mean dependent va	r	22.41667
Adjusted R-squared	0.483746	S.D. dependent var		3.690387

Tables 3 & 4 above revealed the Internal-based performance indicators, i.e., ROA of the Islamic Banks operating in Malaysia. Results have shown significant explanatory power as the results are significant and positive for Assets Management (AM) and bank size (B.S.). In contrast, credit risk and Capital Adequacy Ratio (CAR) appeared negative and significant. The estimated coefficient on operational efficiency is insignificant. However, the findings of market-based performance evaluation indicators showed a sufficient explanatory power of the changes in Tobin's Q. Assets Management (AM), Capital Adequacy Ratio (CAR), and bank size (B.S.) are also positive and significant. On the other hand, operational efficiency (O.E.) and credit risk (C.R.) are negative and insignificant.

Abbas et al., CONCLUSION

The study evaluated the financial performance of Malaysian banks (Islamic & conventional) under the Umbrella of Basel-III in the postfinancial crisis scenario, i.e., for ten years (2008 to 2017), by taking internal and external elements into account, i.e., ROA and Tobin's Q respectively. The results concluded that the model based on internal performance is more explanatory than the market-based elements. All the independent variables have a significant impact, excluding the O.E. (Operational Efficiency) as far as ROA is concerned. The performance model based on market elements has shown positive and significant Asset Management and bank size impact; however, operational efficiency and credit risk have shown negative but insignificant impact, thus establishing that the banking industry in Malaysia has high volatility regarding regard to Basel-III.

The study's outcome is beneficial for the participants of capital markets as it strengthened all previous studies conducted on the subject. Further, the study will motivate the banks to consider the implementation of banks without doubt as it will be applicable in 2019. In the full implementation, the banks may obtain a competitive advantage. Future research may be conducted after the full implementation of Basel-III regulations by using the actual results of liquidity and equity ratios.

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