

PalArch's Journal of Archaeology of Egypt / Egyptology

THE EFFECT OF CREDIT RISK MANAGEMENT ON THE BANK PROFITABILITY: A COMPARATIVE STUDY ON THE ISLAMIC AND CONVENTIONAL BANKS ACROSS THE GCCS

Noran i. Nasib¹, Jamaldeen Faleel²

^{1,2}College of Business, Effat University, Qasr Khuzam Jeddah Saudi Arabia

Noran I. Nasib, Jamaldeen Faleel. The Effect Of Credit Risk Management On The Bank Profitability: A Comparative Study On The Islamic And Conventional Banks Across The Gccs-- Palarch's Journal Of Archaeology Of Egypt/Egyptology 18(13), 842-852. ISSN 1567-214x

Keywords: Bank Profitability, Conventional Banks, Credit Risk Management, Gccs, Islamic Banks

ABSTRACT

This study investigates the credit risk management efficiency and the profitability of both Islamic and conventional banks in the Global Cash Control System (GCCs) between 2007 and 2013. This study also aims to check if the banks that have the most efficient credit risk management are the most profitable banks. The study was executed on ten Islamic banks and ten conventional banks across the GCCs which were selected from. Three financial ratios of credit and two financial ratios of profitability were conducted on the banks. After that, regression analysis was done to analyze the effect of the credit management on the bank's profitability. Mann-Whitney U test was used to evaluate the significance of the differences of each financial ratio between the banks. The study primarily used data extracted from the annual reports published by the banks in their websites which was transformed to percentage and secondary data was the literature review. The finding of the study is that Islamic banks are more profitable than the conventional banks and those Islamic banks have more efficient credit risk management techniques than conventional banks. The study recommends examining the effect of the Islamic window which is established in the conventional banks on its credit risk management and profitability. In addition, a study could be conducted to check the effect of the Qatari law which prohibits any Islamic windows established in conventional banks on the performance of those banks before and after the law execution.

INTRODUCTION

Islamic banking is the most substantive and growing aspect in the Islamic finance fabric. As through the years it becomes one of the key elements in the Islamic finance. Islamic banks differ from conventional banks due to the principle each type of banks follows [1]. Conventional banks follow the rules

and regulation of their financial industry [2]. However, Islamic banks need to additionally apply the rules and regulation of sharia (Islamic law) [3].

Credit risk is one of the main risks faced by the banks due to the nature of their transactions as the lending and borrowing that is practiced by banks makes it affected if their counterpart financial stability and commitment in paying its obligations become fragile. Therefore, in Basel [4] the credit risk was defined as “the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed term”. Banks either conventional or Islamic are affected by credit risk due to the fact that most their transactions are based on loans given either in monetary form, goods or services and if a default occurred, it may lead to the downfall of the banks which have been proven in the sub-prime lending crisis in the US in 2008.

The financial ratios in Sirsj and Pillai [5] study resulted in the fact that Islamic banks have performed better than conventional banks in the period from 2005 till 2010. Due to the fact that the researchers included the financial crisis of 2008 effect in their study it produced the result that Islamic banks were less affected by the crisis than conventional banks. The researchers supported this finding by conducting AAG rate, which identifies the changes in selected performance indicators. One of those indicators was the operating profit, which Islamic bank's ratio was higher than the conventional banks. Moreover, they highlights that conventional banks suffered from a credit losses although they had created revenue [5].

Ben Khediri et al. [6] have compared between Islamic and conventional banks in the GCC by using classification techniques proven that financial ratios can be used to compare between two different types of banks and that the classification model can be used also in comparative between types of banks in credit risk, insolvency risk, operating leverage and off-balance sheet activities. However, in the profitability and liquidity, classification model is not applicable. The logistic regression model was proven to be more accurate and destructive than the other modules used [6].

Singh et al. [7] conducted a study on the credit risk management in Islamic banks and defined the Islamic banks' exposure to the credit risk and the deference between the conventional banks and the Islamic banks in the credit risk management. Moreover, they have construe a linear regression model for the Islamic banks where the credit risk is the independent variable to examine the dependent variables effect on the credit risk which was developed by using SPSS program. Their study found that the variables of loan loss provisions, natural log of total assets, risk weighted assets, regulatory and loan concentrations in public sector have a significant positive effect on the credit risk of Islamic banks. The variables of loan to deposit ratio, size of the bank and capital adequacy ratio have an insignificant statistical relationship with credit risk in Islamic banks. The variables of leverage, loan growth and loan concentration in private sector have a significant negative effect on the credit risk of Islamic banks [7].

A study done by Masood et al. [8] on the credit risk management in the United Arab Emirates for Islamic and conventional banks in the region, the Islamic bank managers were found to be using newer and robust credit risk management techniques alongside the traditional ones. Moreover, the Islamic banks were found to be more involved in developing their credit risk framework where conventional banks tend to develop risk adjusted return on capital [8].

In the light of the credit crisis of 2008 and its aftermath, which have touched the banks and countries around the world which contribute to their defaults and finally to their downfall, this lead to the cerebration that if those banks and countries had serious and sustainable credit risk management it would have kept them out of the losses and have a stable monetary ground. Therefore, this study aims to identify the effect of credit risk management on the bank profitability a comparative study on the Islamic and conventional banks across the GCCs.

METHODOLOGY

This study compares the Islamic banks and conventional banks following the chosen method of financial ratios. Financial ratio analysis can be used effortlessly in comparing between the Islamic banks and conventional banks and also can help in comparing the performance evaluation of the same bank through different time periods [9, 10].

First, calculate the financial ratios for measuring credit efficiency of each bank and perform a descriptive statistics on the data to compare the result of both banks against each other to find the type of bank that the financial ratio indicates have the higher credit risk management.

Secondly, calculate the profitability ratios for both types of banks and perform a descriptive statistics on the data and compare the results opposite each other to find if Islamic bank are more profitable than conventional. Moreover, due to the fact that the financial ratio data does not follow a normal distribution the Mann-Whitney U test will be conducted to test if the difference in the financial ratio between the Islamic and conventional banks is significant.

Finally, to be able to study if the credit risks management has a significant and positive relationship with the bank's profitability. The data will be transformed to follow the normal distribution to conduct a regression analysis on it.

Hypotheses

H1: Islamic banks have more advance credit risk management techniques than conventional banks.

H2: Islamic banks are more profitable than conventional banks.

H3: Credit risk management techniques have a positive relationship with the bank's profitability.

Data

Based on a list with the 50 top GCCs banks [11] and a list of the ranking GCCs safest Islamic banks [12] and the availability of the bank annual report on its website, ten conventional banks and ten Islamic banks were chosen listed in Table 1 for the period of seven years starting from 2007 until 2013 the study primly data will be the quantitative data from the bank published annual reports.

Table 1: List of the Conventional and Islamic Banks

Islamic Banks	Conventional Banks
Alrajhi Banking Corporation (KSA)	Banque Saudi Fransi (KSA)
Bank Albilad (KSA)	National Bank of Oman (Oman)
Abu Dhabi Islamic Bank (UAE)	First Gulf Bank (UAE)
Dubai Islamic Bank (UAE)	Commercial Bank of Qatar (Qatar)
Qatar Islamic Bank (Qatar)	Al Khaliq Commercial Bank (Qatar)
Al Salam Bank (Bahrain)	Ahli Bank (Qatar)
Boubyan Bank (Kuwait)	International Bank of Qatar (Qatar)
Kuwait Financing House (Kuwait)	Gulf Bank (Kuwait)
Bahrain Islamic Bank (Bahrain)	Burgan Bank (Kuwait)
Khaleeji Commercial Bank (Bahrain)	Bank of Bahrain and Kuwait (Bahrain)

Result And Discussion

Primary Data Analysis

By collaborating the methods in both Siraj and Pillai [5] as well as Wasiuzzaman and Gunasegavan [13] of first calculating ratios average of each of the ratios and comparing them between the Islamic and conventional banks to understand the indication of each of the ratios to the banks performance an analysis of the descriptive statistic table will be discussed to have a more general outlook on both the Islamic and conventional bank stand on each financial ratio.

To achieve that 1400 observations from the ten Islamic banks and the ten conventional banks on the duration of 7 years from 2007 till 2013 annual reports was collocated to calculate the financial ratio as a result there are 140 percentage to each financial ratios for both banks. However, to be able to do the comparative between the two types of banks the data was separated in to two panels one for the Islamic banks and one for the conventional banks.

Non-performing loans to gross loan ratio (NPLGL)

In this financial ratio, the impaired loans was divided over the gross loans of the banks individually, afterwards the average percentage of two types of banks from 2007 till 2013 was calculated to highlight the bank that have the lower percentage. From Table 2, the Islamic banks had a higher average percentage through the years due to the high amount of impaired loans but

conventional banks have faculty maintained a lower ratio except in 2009 which can be referred back to the financial crisis of 2008 which have increased the amount of impaired loans in the banks. Moreover, when comparing the averages of banks, the conventional banks have better credit performance than the Islamic banks.

Table 2: NPLGL Ratio

Year	2007	2008	2009	2010	2011	2012	2013	Total Average
Average Islamic Bank	1.48 %	3.35 %	8.01 %	8.37 %	9.93%	6.30%	5.85 %	6.18%
Average Conventional Banks	1.71 %	2.11 %	4.07 %	2.97 %	2.74%	2.47%	2.43 %	2.64%

Common Equity to Total Assets (EQTA)

A higher percentage in the common equity to total assets ratio is an indication that the bank can cover up any assets losses that may accord. This ratio was calculated by dividing the common equity of the bank over the total assets from 2007 till 2013 to identify the percentage of the common equity from the total asset. Islamic banks resulted average percentage through the period as illustrated in Table 3 indicates that Islamic banks have a superior capacity to cover their assets losses than the conventional banks. Moreover, conventional banks percentage has decreased through the years. Finally, the average percentage of the whole study period determine that the Islamic banks from 2007 till 2013 have better ability to shield itself from assets losses.

Table 3: EQTA Ratio

Year	2007	2008	2009	2010	2011	2012	2013	Total Average
Average Islamic Bank	12.03 %	9.49 %	9.01%	8.92%	8.48 %	7.98 %	7.38 %	9.04%
Average Conventional Banks	10.73 %	7.87 %	7.14%	6.44%	5.61 %	5.94 %	4.08 %	6.83%

Total Equity to Net Loans (EQL)

The total equity to net loans ratio is measured by dividing the total equity of the bank over their net loans. Achieving a higher percentage is what we look for in this ratio as it indicates the bank ability to cover any loan losses that may accrue. Table 4 shows that conventional banks had a 28.94% percentage average in 2007 however it dropped by a percentage average of 6.14% the

next year, moreover it still have not rebooted themselves to their 2007 percentage by assume that the reason of the fall was due to the financial crisis of 2008 and that the conventional banks still have not recovered from the aftershock of the crisis. However, Islamic banks have steadily increased their average ratio percentage through the years however, in 2009 it had a fall in the average percentage of 5.88% but it has increased in the following years. At the end, the average percentage of the total equity to net loans ratio comparative between the Islamic and conventional banks that Islamic banks have superior ability to cover any loan losses than conventional banks.

Table 4: EQL ratio

Year	2007	2008	2009	2010	2011	2012	2013	Total Average
Average Islamic Bank	34.03%	33.60%	27.72%	31.09%	30.20%	27.43%	26.48%	30.08%
Average Conventional Banks	28.94%	22.80%	25.91%	27.13%	24.61%	22.90%	19.31%	24.51%

Return on Assets (ROA)

Table 5 shows that Islamic banks financial ratio average have plummeted from the years of 2007 till 2009 as it was 4.23% then kept fallen till it reached 0.62% also, in the same years the conventional banks had the same result as their percentage ratio average was 2.36% and then it have descended till it reached 0.69%. From the previous outcome, both Islamic and conventional banks have been affected by the 2008 financial crisis therefore both bank had low ROA ratio. In addition, the conventional banks had a higher return on their assets in 2007 and 2008 in comparison with the Islamic banks. Moreover, on the following years from 2010 till 2013 the conventional and Islamic banks had maintained relatively the same percentage average for their ROA. As a result the total average of both Islamic and conventional banks through the time period from 2007 till 2013 was to a certain degree similar with Islamic bank having ROA of 1.66% and conventional banks having ROA of 1.62% but due to the fact that Islamic bank had an advantage on the conventional bank with 0.04% therefore, the Islamic banks are more efficient in producing profit from their assets than the conventional banks.

Table 5: ROA Ratio

Year	2007	2008	2009	2010	2011	2012	2013	Total Average
Average Islamic Bank	4.23%	2.75%	0.62%	1.13%	0.94%	1.01%	0.94%	1.66%

Average Conventional Banks	2.36 %	0.69 %	1.49 %	1.78 %	1.76 %	1.73 %	1.52 %	1.62%
----------------------------	--------	--------	--------	--------	--------	--------	--------	-------

Return on Equity (ROE)

Return on equity is calculated by dividing the net profit of the bank over the total equity, it is a measure of the banks' ability to produce profit from their equity specifically from their shareholders investments. Table 6 shows both the conventional banks and the Islamic banks had a huge drop in their ROE ratio average in 2008 which may be the cause of the financial crisis of 2008 that had the impact on the banks' ability to drive any profit from their equity however the conventional banks ROE have suffered drastically more than the Islamic as in 2008 the conventional bank ROE was -83.75%. However, both banks have increased their ratio from 2010 till 2013 although the conventional banks had a higher return on their equity in the previous stated period than the Islamic banks. The total average of the period from 2007 till 2013 that Islamic banks had a higher percentage total average percentage of 8.29% from the conventional banks percentage total average of -1.57%.

Table 6: ROE Ratio

Year	2007	2008	2009	2010	2011	2012	2013	Total Average
Average Islamic Bank	18.66 %	13.02 %	0.73 %	6.96 %	6.26 %	5.03 %	7.38 %	8.29%
Average Conventional Banks	17.79 %	-83.75 %	10.02 %	10.65 %	10.96 %	12.15 %	11.20 %	-1.57%

Descriptive statistical analysis

Table 7 shows the Mann-Whitney U test result that from the credit risk ratios only the EQTA ratio in which the Islamic banks were superior to the conventional banks in covering their loses in their assets was significant however in the rest of the credit risk ratios the difference between the samples were insignificant. In addition from the profitability ratios were the Islamic banks were found to have more ability to generate more profits from their assets and equity, both the ROA ratio and the ROE ratio differences were found to be insignificant.

Table 7: Mann-Whitney U test for two independent samples

Variables	(NPLGL)	(EQTA)	(EQL)	(ROA)	(ROE)
Mann-Whitney U	2064.0	2039.0	2069.0	2336.0	2259.0
Z	-1.609	-1.713	-1.588	-.475	-.796
Asymp. Sig. (2-	.108	.087	.112	.635	.426

tailed)					
a. Grouping Variable: bank type					

Now before determining if the credit risk ratios had a significant effect on the profitability ratios a correlation test was performed on the data to check for the multicollinearity according to Gujarati & Porter [14] if the coefficient correlation of the variables did not exceeded 0.8 then there is no problem of the multicollinearity between the variables. The results of correlation between the variables were low and the highest coefficient correlation was between the EQTA and EQL with a coefficient of 0.76.

Regression analysis

The regression was run on Islamic banks and conventional banks separately moreover the regression in each bank type was conducted on the ROA and the ROE ratios as dependent variables separately which had shown in Table 8, 9 10 and 11 respectively.

The Islamic banks ratios output from the regression analysis with the ROA as a dependent variable give the result that the EQTA ratio (0.960) had a significant and positive relationship with the ROA ratio of Islamic banks in the GCCs but with the ROE ratio the EQTA ratio (0.542) has a negative and significant relationship in the Islamic banks in the GCCs this is an indication that if the Islamic bank had a higher capability to cover their assets losses it will effect positively on the bank ability to generate profit from their own assets but not for their equity as it will have a negative effect on it. However the NPLGL ratio had insignificant and negative relationship with both the ROA and ROE ratios in the Islamic banks in the GCCs which means that Islamic banks in the GCCs ability to generate profit from both their assets and their equity is not affected with the bank higher percentage of bad loans.

Table 8: Regression analysis on Islamic banks ROA as independent variable

Model		B	Std. Error	T	Sig.
1	Constant	.000	.010	.018	.986
	NPLGL	-.009	.003	-2.881	.005
	EQTA	.000	.006	-.051	.960

Table 9: Regression analysis on Islamic banks ROE as independent variable

Model		B	Std. Error	T	Sig.
	Constant	-.012	.064	-.186	.853
	NPLGL	-0.40	.020	-1.985	.051
	EQTA	-0.24	.038	-.614	.542

In the conventional banks regression analysis result the ROA and the ROE ratios had a significant negative relationship with the EQTA ratio which means that for the conventional banks of the GCCs to be able to generate profit from their assets and equity they need to have a good capacity to cover their assets losses. However, the NPLGL had a negative significant

relationship with the ROA and a positive significant relationship with the ROE ratios therefore for the conventional banks of the GCCs if they had good performance of the credit portfolio it will be able to generate profit from their equity but not from their assets.

Table 10: Regression analysis on conventional banks ROA as independent variable

Model		B	Std. Error	T	Sig.
1	Constant	.009	.005	1.671	.100
	NPLGL	-.003	.002	-1.946	.056
	EQTA	-.002	.003	-.759	.451

Table 11: Regression analysis on conventional banks ROE as independent variable

Model		B	Std. Error	T	Sig.
1	Constant	.115	.039	2.951	.004
	NPLGL	.007	.011	.593	.556
	EQTA	-.012	.021	-.580	.564

CONCLUSION

The obtained results show that Islamic banks had better credit risk management and that they were more profitable than conventional banks in the GCCs countries. However, the Islamic banks were found to have a large ratio of their loans that were concerned as non-performing loans (bad loans). Afterward, a Man-Whitney U test was run on the ratios to examine the significant of the differences between the Islamic and conventional banks in which the only the difference in the banks' ability to cover their assets losses is significant which the Islamic banks had the higher ratios in it through the period. The analysis reveals the Islamic banks have the ability to cover the assets loses had a positive and significant relationship with the profit generated from the assets however with the profit generated for the equity it had a negative and significant relationship. In the contrary, the conventional banks had a positive and significant relationship between the profit generated from the assets and the equity with the bank ability to cover their assets losses. Moreover, the ratio of the non-performing loans from the total loans in the Islamic banks had an insignificant relationship with the banks profit. But the conventional banks had a significant relationship between the nonperforming loans and the profit however the relationship was negative with the profit generated from the assets and positive with the profit generated from the equity.

Acknowledgments

The authors would like to thank to the unconditionally support from Islamic Financial Management, College of Business, EFFAT University.

REFERENCES

Salman, A., and Nawaz, H. 2018. Islamic financial system and conventional

- banking: A comparison. Arab Economic and Business Journal 13, 2, 155-167.
- Alam, N., Binti Zainuddin, S., and Rizvi, S. 2019. Ramifications of varying banking regulations on performance of Islamic Banks. Borsa Istanbul Review 19, 1, 49-64.
- Boukhatem, J., and Ben Moussa, F. 2018. The effect of Islamic banks on GDP growth: Some evidence from selected MENA countries. Borsa Istanbul Review 18, 3, 231-247.
- Principles for the Management of Credit Risk. 1999. Basel Committee. Basel Committee on Banking Supervision.
- Siraj, K., and Pillai, P. 2012. Comparative Study on Performance of Islamic Banks and Conventional Banks in Gcc Region. Journal of Applied Finance & Banking, 123-161.
- Ben Khediri, K., Charfeddine, L., and Ben Youssef, S. 2015. Islamic Versus Conventional Banks In The Gcc Countries: A Comparative Study Using Classification Techniques. Research in International Business and Finance, 75-98.
- Singh, V. V., Kedia, N., and Anima. 2013. Credit Risk Management in Islamic Banking. International Journal of Management, It and Engineering, 52-64.
- Masood, O., Al Suwaidi, H., and Pun Thapa, P. D. 2012. Credit Risk Managment: A Case Differentiating Islamic and Non-Islamic Banks in UAE. Qualitative Research in Financial Markets, 197-205.
- Onakoya, A. B. 2013. The Performance of Conventional and Islamic Banks in the United Kingdom: A Comparative Analysis. Journal of Research in Economics and International Finance, 29-38.
- Bilal, M., and Amin, H. 2015. Financial Performance of Islamic and Conventional Banks During and After US Sub-prime Crisis in Pakistan: A Comparative Study. Global Journal Al Thaqafah 5, 2, 73-87.
- Gulf Business. 2013. Top 50 Gcc Banks. Retrieved December 14, 2020 from Gulf Business: <http://gulfbusiness.com/lists/top-50-gcc-banks/#.vi3yaiusu66>
- Cunningham, A. 2014. Magazine. Retrieved December 14, 2020 from Global Finance: <https://www.gfmag.com/magazine/february-2014/ranking-gccs-safest-islamic-banks>
- Wasiuzzaman, S., and Gunasegavan, U. N. 2013. Comparative Study of the Performance of Islamic and Conventional Banks. Humanomics, 43-60.
- Gujarati, D., and Porter, D. 2009. Basic Econometrics, 5th Ed. New York: McGraw-Hill.

****This form below helps us to understand your paper better, so please fill in the information of all authors. The form itself will not be published.***

Authors' background

Position can be chosen from:				
Prof. / Assoc. Prof. / Asst. Prof. / Lect. / Dr. / Ph. D Candidate / Postgraduate / Ms.				
Paper ID	Position , Full Name,	Email address	Research Interests	Personal website (if any)

	Working unit & nation			
	Dr. Faleel Jamaldeen, Effat University, Saudi Arabia	jfaleel@effatuniversity.edu.sa		
	Student, Noran I. Nasib, Effat University, Saudi Arabia	ninasib@effatuniversity.edu.sa		