“Performance differences between Islamic and conventional banking forms”

AUTHORS	Turki Alshammari https://orcid.org/0000-0003-2034-6802

ARTICLE INFO	Turki Alshammari (2017). Performance differences between Islamic and conventional banking forms. *Banks and Bank Systems*, *12*(3), 237-246. doi:10.21511/bbs.12(3-1).2017.08
DOI	http://dx.doi.org/10.21511/bbs.12(3-1).2017.08
RELEASED ON	Monday, 30 October 2017
RECEIVED ON	Thursday, 22 June 2017
ACCEPTED ON	Monday, 28 August 2017

JOURNAL	"Banks and Bank Systems"
ISSN PRINT	1816-7403
ISSN ONLINE	1991-7074
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
18	0	6

BUSINESS PERSPECTIVES

LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10, Sumy, 40022, Ukraine

www.businessperspectives.org

Turki Alshammari (Kuwait)

PERFORMANCE DIFFERENCES BETWEEN ISLAMIC AND CONVENTIONAL BANKING FORMS

Abstract

This paper strives to recognize the possible performance differences between the two popular banking forms in the Gulf Cooperation Council (GCC) countries. Applying different methodologies on the data that span the period 2003–2015, this study documents significant differences with respect to the period, countries, and performance measures. Specifically, conventional banks in GCC countries outperform their Islamic counterparts in profitability. Also, bank specific factors such as liquidity, capital adequacy, bank size and growth all affect the profitability. In addition, GCC conventional and Islamic banks were isolated from the 2008 subprime crisis even though their profitability seems to be decayed differently over the period of the economic downturn.

Keywords Islamic banks, conventional banks, financial performance, ROA, ROE, GCC countries

JEL Classification G21, D02

Received on: 22nd of June, 2017
Accepted on: 28th of August, 2017

Turki Alshammari, Associate professor, Kuwait University, Finance Department, Kuwait

INTRODUCTION

The recent global financial crisis has attracted the attention to the Islamic banking as a different type of banking that mitigates the mismatch of short-term, on-sight demand deposits contracts with long-term uncertain loan contracts (with equity elements) (Cihak et al., 2010). According to the Islamic Financial Service Board (IFSB) report (May 2017), assets of Islamic banks totaled US$1.89 trillion in 2016 and grew 50% faster than the overall banking sector with an average annual growth of 17.6% from 2008 to 2012. Further, Islamic bank assets are expected to reach US$3.4 trillion by 2018 (Ernst & Young, 2013) and US$6.5 trillion by 2020 (IFSB, 2017).

Although the function of the intermediation process is the same, the business model of Islamic banks differs largely from their conventional counterparts. This difference may render diverse (and consistent) performance levels across time. Mainly, Islamic banks business model is based on the concept of reciprocal profit and loss sharing among related parties on both the liability and the asset side. In addition, financial transactions that involve interest payment and speculative trading are totally prohibited. Hence, the popular loan granting as a common financing form is prohibited.

For that, this paper strives to scan any differences in performance between two forms of banking, the Islamic banking form and the conventional banking form in a homogeneous environment, the Gulf Cooperation Council (GCC) countries. GCC countries include

Kuwait, Saudi Arabia (KSA), Bahrain, Qatar, United Arab Emirates (UAE), and Oman. These countries share, to a high extent, an integrated economic environment as many economic policies are outstandingly coordinated before applied. In addition, GCC continues to be as the largest domicile for Islamic financial assets as it has experienced very recently a further increase in market share to 42.3% of the global Islamic financial assets.

This paper shall contribute to the developing literature in the sense that it will shed light on the argumentative literature that relates to corporate performance trajectories across time and how different factors affect that performance, which completes a building block of the literature. The remainder of the paper is structured as follows: section one presents the literature review, where section two covers data and methodology of this research. The empirical results are contained in section three and final section presents the concluding remarks.

1. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Numerous researchers have conducted studies to analyze the financial performance determinants of conventional banks[1]. At the same time, researchers also examined performance of Islamic banks. Milhim and Istaiteyeh (2015) analyze the performance of conventional banks versus Islamic banks in Jordan during the period 2009–2013. As they employed the financial ratio analysis (profitability, liquidity, solvency and efficiency), they document significant differences in performance of Islamic and conventional banks. Specifically, they find that Islamic banks are less profitable, more liquid and less efficient as compared to conventional banks.

Tlemsani et al. (2016) scrutinize the performance differences of Islamic and conventional banks during the period 2007–2008 in United Arab Emirates (UAE) using certain sets of variables to test the capabilities of the two forms of banking models to withstand shocks and depressions (a stress test). As they employ ratios mean differences, they document that both banking forms were negatively influenced by the 2008 crisis but the effect was less for the Islamic banks due to their rich asset-based banking model.

Altamimi (2010) examines factors that influence the performance of United Arab Emirates (UAE) Islamic and conventional banks during the period 1996–2008. The factors used in his study are economic conditions, size, financial development, liquidity and bank concentration. Employing a pooled OLS, he documents dissimilarities of both the effect of factors on bank performance of Islamic versus conventional banks and dissimilarities with respect to bank performance.

Alsaratwi (2013) examines the effect of governance on performance for selected Islamic and conventional banks in GCC countries in 2011. He employs a questionnaire in order to detect the governance level in banks. He documents a significant effect of the governance on the bank performance. Effect exists for both performance of Islamic banks, as well as the performance of conventional banks. However, the effect clearly differs significantly between the two banking forms.

Almanaseer (2014) analyzes the effects of the 2008 subprime crisis on the GCC Islamic banks. He reached the conclusion of no effect of the crisis on the profitability of the GCC Islamic banks due to the profit sharing systems mechanism, which allows Islamic banks to keep their net worth and avoid deterioration under difficult economic situation.

Mollah et al. (2017) examined, in 14 countries, whether the difference in governance structure of 52 Islamic banks influences risk taking and performance compared to 104 conventional banks during the period 2005–2013. They concluded that, distinct from conventional banks, the governance structure of Islamic banks plays a decisive role in risk-taking activities, although Islamic

1 See, for example, Goddard et al. (2004); Peters et al. (2004); Athanasoglou et al. (2008); Kosmidou et al. (2008); Heffernan and Fu (2008).

banks tend to be relatively more capitalized. Their findings show country variations.

Hussein et al. (2014) analyze the resilience of Islamic banks during the 2008 global financial crisis. After carrying out some diagnostic tests, they document a structural break in the data, which confirms the effect of the crisis on banks performance. They also find a significant positive relation between profitability and capital adequacy, financial risk and operational efficiency. In addition, they contend that Islamic GCC banks are well capitalized as per the Basel standards, which safeguards their performance.

Shah (2014) investigates possible differences in Islamic and conventional banks in Pakistan during the period 2003–2012. He finds significant differences between Islamic and conventional banks in risk-weighted credit exposures, regulatory capital, loan portfolios, debt capacity, management's control over expenses in proportion to income and return on assets, and liquidity.

Beck et al. (2010) employ the financial intermediation theory to scrutinize the agency problems arising from information asymmetries between lender and borrower by constructing a comparison between the two banking forms with respect to business model, efficiency, asset quality and stability. They also analyze the relative performance of both banking forms during the recent 2008 subprime crisis. Their empirical findings document that there exist significant differences between Islamic and conventional banks in liquidity, efficiency, stock returns across time (before and after 2008 crisis) and across countries. In addition, conventional banks that operate in countries side by side to Islamic banks are less stable, although more cost effective.

One can glean from the literature review above a conjecture that there exists a difference between Islamic and conventional banks in many different business settings. This paper strives to explore any differences in financial performance employing a distinctive methodology and more recent data in order to detect any alleged differences in performance. The sample is unique, as it comprises country evidence, as well as regional evidence with respect to bank performance. Countries included in this study comprise the GCC countries where about 42% of all Islamic banks assets are domiciled. Moreover, GCC Islamic banks contribute about 70% of the growth rate in Islamic banking assets in 2014 (IFSB, 2017). Hence, the milieu of the two banking forms provides an inimitable and peerless setting by which one can analyze differences in bank performance during an extended period, before and after the 2008 subprime crisis, as the integrated environment minimizes the effect of any external shocks. Based upon that, the following hypotheses are of concern:

H1: There are no differences between Islamic and conventional banks in terms of financial performance.

H2: Using different financial performance measures does not influence the obtained results.

H3: The obtained results are not sensitive to country selection.

2. DATA AND METHODOLOGY

This paper uses year-end financial statement data that spans the period 2003–2015 and produced by the Kuwait Institute of Banking Studies financial database (KIBS). The extended 13 years of data renders more credibility in the results of the analysis and allows examining the influence of the 2008 subprime crisis on bank performance[2].

After some preliminary analysis, it was sought to focus on three (out of six) countries of the GCC countries, namely, Kingdom of Saudi Arabia (KSA), Kuwait and United Arab Emirates (UAE), for most of the analysis. Banking systems, assets level, regulations and activities are relatively massive in these three countries relative to those in the excluded countries. Besides, approximately 58.5% of the international participation banking assets are based on these three countries (IFSB, 2017).

Table 1 presents summary statistics of the data used in the study for the years 2011 and 2015.

2 The subprime crises affected both the investment and financing activities of banks (of all types), as it reduced the funding of banks due to lower savings. The relative importance of each of these factors varies by the region.

Table 1. Number of all banks, total assets (in US$), number of conventional banks and the percentage of total assets in conventional banks

Year	Country	No. of banks	Total assets (billion US $)	No. of conventional banks	% of bank assets in conventional banks
2011	Saudi Arabia	12	$ 401.9	9	81%
	Kuwait	10	$ 174.6	5	61%
	Emirates	18	$ 304.5	14	82%
2015	Saudi Arabia	12	$ 579.5	9	79%
	Kuwait	10	$ 231.9	5	63%
	Emirates	18	$ 454.8	14	79%

Assets are denominated in US dollars from the data source. One can glean from the table that a number of banks have not changed. The book value of their assets have increased considerably though. While Emirates have the largest number of banks (45%), it is apparent that its banks assets are less than those of Saudi Arabia. In addition, in the three countries, conventional banks are the largest in terms of total assets relative to Islamic banks.

The variables used to measure and evaluate bank performance are ROA and ROE, where ROA shows the management ability to use bank assets in generating profits, while ROE reflects the effectiveness of management to use shareholders equity, although it neglects the financial leverage. Hence, both indicators indicate different outlook of profitability.

In addition, mean differences are used to test any differences in ROA and ROE. In addition, pooled regressions are employed to test any differences in the sources of performance for the two banking forms. Moreover, dummy variables are used to test for the performance differences between the two banking forms. Specifically, as in Cornett et al. (2010), bank liquidity, operating efficiency, capital adequacy and growth indicator are all employed.

3. EMPIRICAL RESULTS

The thrust of this paper is to analyze bank performance of two banking forms in the GCC countries. Table 2 presents performance differences between conventional and Islamic banks in the GCC countries in three different time intervals, name-

Table 2. Performance differences between conventional and Islamic banks in the GCC countries

Period	Conventional banks	Islamic banks	Obs (conv)	Obs (Islamic)	Sig (p-value)	If only Ku, KSA, UAE
2003–2015	0.0256 (0.1599)	0.0163 (0.0895)	512	253	0.0001 (0.034)	Sig.
2005	0.043 (0.2792)	0.0274 (0.1581)	38	15	0.26 (0.22)	Sig.
2006	0.0378 (0.2583)	0.0344 (0.1542)	39	16	0.8 (0.262)	Insig.
2007	0.0316 (0.2165)	0.0395 (0.17)	39	17	0.44 (0.46)	Insig.
2005–2007	0.0374 (0.251)	0.034 (0.161)	116	48	0.633 (0.077)	Insig.
2008	0.0202 (0.0785)	0.026 (0.1422)	40	18	0.538 (0.549)	Sig.
2013	0.0204 (0.1395)	0.0091 (0.0594)	40	22	0.022 (0.018)	Sig.
2014	0.0201 (0.1443)	0.0125 (0.0894)	40	22	0.069 (0.088)	Sig.
2015	0.018 (0.1265)	0.0127 (0.0874)	40	22	0.251 (0.255)	Insig.
2013–2015	0.0195 (0.13668)	0.0114 (0.0787)	120	66	0.002 (0.002)	Sig.

Note: numbers are mean values of ROA of the relative banks, while those between parentheses relate to ROE; p-values that test the hypothesis of "equal means' are reported for ROA of the relative banks, while those between parentheses relate to ROE; Ku represents Kuwait, KSA represents Kingdom of Saudi Arabia, and UAE represents Emirates; Obs stands for "number of observations"; p-value = testing the null hypothesis that the mean difference is equal to zero.

ly the 2008 subprime crisis, before and after the 2008 subprime crisis. In general, the table figures assert clearly the superiority of the conventional banks over the Islamic banks in profitability. This superiority is statistically significant. Particularly, pooling all data (2003–2015), the ROA of the conventional banks is 2.56% compared to 1.63% for Islamic banks, and the difference of 0.93% is significant at the 1% level. The ROE of conventional banks is 15.99% compared to 8.95% for Islamic banks, and the difference of 7.04% is significant at the 5% level (p-value = 3.4%).

The last column shows the results if only three countries of GCC are considered (i.e., Kuwait, Saudi Arabia, and Emirates). The results resemble those in the table in terms of the significance level (5% level) for the whole period. Before the 2008 subprime crisis though, the results of the mean difference test are insignificant, except for the 2005. The same is true when considering only the three countries group. Nevertheless, the absolute value of ROA and ROE shows the dominance of conventional banks over Islamic banks in terms of profitability. In 2008, the results are reversed. When considering banks in all GCC countries, ROA (ROE) becomes 2.02% (7.85%) for conventional banks against 2.6% (14.22%) for Islamic banks. The results are insignificant though. However, the results become significant (at the 5% level) when considering only three countries group. After the 2008 subprime crisis, the results come back to what it was on before the crisis year in terms of the superiority of conventional banks over the Islamic banks. All results are significant except for the year 2015. For example, in 2013, ROA (ROE) of the conventional banks is 2.04% (13.95%), while it is only 0.91% (5.94%) for the Islamic banks. The results are significant at the 5% level.

In summary, the superiority of the conventional banks over Islamic banks has been confirmed by the findings of Milhim and Istaiteyeh (2015) for the two banking forms in Jordan, and the conclusions of Tlemsani et al. (2016) in United Arab Emirates. The reversion of results in the 2008 subprime crisis as Islamic banks performed better than their conventional counterparts (although not significant) confirms Tlemsani et al.'s (2016) conclusions in that Islamic banks were less hit as they are better capitalized[3].

Another interesting result in Table 2 is that the gradual reduction in banks profitability was more severe for conventional banks (more pronounced in ROE). For example, the ROA of the Islamic banks shrunk by 31% before the 2008 subprime crisis versus 36% for conventional banks. Cihak et al. (2010) conjecture that Islamic banks are more cushioned against economic downturns than their conventional counterparts, as they are prohibited from engaging in riskier interest-related products (i.e., collateralized debt obligations) but instead secure all extended credit with real assets. To test this conjecture, Table 3 presents how the mean difference varied over the years from 2005 till the 2008 subprime crisis. Since the t-test assumes that performance measures are normally distributed, the nonparametric Wilcoxon ranksum test is employed to corroborate the results, as it assumes the two samples are from populations with the same distribution.

The mean difference of ROA of conventional banks has diminished by 0.51% from year 2005 to 2006, and the reduction seems statistically insignificant (only if we consider the 10% level for the Wilcoxon test). Hence, no significant change is perceived between the mean ROA of 2005 and that of 2006. However, we see that the reduction in ROA for conventional banks from 2007 to 2008 by 1.17% is highly significant at the 1% level considering both the parametric and the nonparametric measures. The case of Islamic banks is different as the absolute increase in the ROA over the period 2007–2008 is not significant (only if we consider the 10% level for the Wilcoxon test).

The evidence in Table 3 suggests that the decrease in conventional banks' profitability was more severe than that of the Islamic banks, which seems to withstand the financial shock caused by the 2008 economic downturn, a result that is supported by Cihak et al. (2010).

3 The coefficient of variations (standard deviation divided by ROA and ROE) was calculated and was found to be unconditionally higher for Islamic banks at all years, which indicates riskier Islamic banks relative to their conventional counterparts (confirmed by Hussein et al. (2014) and Shah (2014). In addition, using the nonparametric Wilcoxon ranksum test produced qualitatively similar results to those obtained by employing the t-test. Hence, it is not reported for brevity purposes.

Table 3. ROA mean difference before and during the 2008 subprime crisis

Mean difference	Conventional banks	P-value (t-test)	P-value (z-test)	Islamic banks	P-value (t-test)	P-value (z-test)
Between 2005 and 2006	-0.0051	0.115	0.018	-0.0134	0.146	0.594
Between 2006 and 2007	-0.0062	0.104	0.011	0.0058	0.412	0.733
Between 2007 and 2008	-0.0117	0.001	0.0001	0.0084	0.479	0.088

In order to identify the sources of differences in the performance, Table 4 is produced to compare the main determinants of the ROA and ROE of both banking forms. When considering the whole period (2003–2015), all ratios of the Islamic banks and the conventional banks seem to be statistically significantly different, except for the equity to assets ratio. In terms of liquidity, GCC Islamic banks seem to be more liquid than GCC conventional banks (Islamic banks have 11.44% cash to asset ratio versus only 2.65% for conventional banks). This may partially explain lower relative profitability of Islamic banks, but may indicate relatively more solid structure of Islamic banks. This result confirms the findings of Milhem et al. (2015) for banks in Jordan and the findings of Tlemsani et al. (2016), but contradicts the conclusions of Shah (2014) who documents lower liquidity level for Islamic banks in Pakistan and Beck et al. (2010).

Islamic banks in GCC seem to be less capitalized than conventional banks, as in Shah (2014), but is contrary to that of Beck et al.'s (2010) findings, even after controlling for several variables. The Islamic banks in GCC countries are less efficient than their conventional counterparts as the fixed asset ratio (FTA) of Islamic banks is 3.77% versus only 1.18% for conventional banks, a result that confirms the conclusions of Milhem et al. (2015), but contradicts Beck et al. (2010) and Shah (2014). This might be logical since GCC conventional banks have longer history of operations and considerably chronologically preceded their Islamic counterparts. For the growth rate, Islamic banks achieved 5.14%, while conventional banks made

Table 4. Mean differences of some financial ratios that relate to both conventional and Islamic banks

Period	Variable	Conventional	Islamic	Obs conv	Obs Islamic	Sig (P-value)
2003–2015	CTA	0.0265	0.1144	512	235	0.0001
	ETA	0.1817	0.18			0.906
	DTE	7.293	4.384			0.0001
	LTE	5.349	4.739			0.071
	FTA	0.0118	0.0377			0.0001
	IGR	0.1089	0.0655			0.0001
2008	CTA	0.0265	0.0887	40	18	0.004
	ETA	0.1637	0.1862			0.642
	DTE	10.582	3.963			0.052
	LTE	8.276	4.779			0.331
	FTA	0.0136	0.0482			0.0001
	IGR	0.0768	0.0769			0.999
2013–2015	CTA	0.0404	0.1153	120	66	0.0001
	ETA	0.1792	0.1468			0.086
	DTE	6.917	4.934			0.08
	LTE	5.267	5.132			0.855
	FTA	0.0107	0.0397			0.0001
	IGR	0.0875	0.0514			0.001

Note: CTA = Cash to Assets; ETA = Equity to Assets; DTE = Deposits to Equity; LTE = Loan to Equity; FTA = Fixed assets to Assets; IGR = Internal Growth Rate (the % of end of year retained income divided by the beginning of the year bank equity fund); ROA (ROE) = Return on Assets (Equity); Obs Con = Observations of conventional banks; Obs Islamic = Observations of Islamic banks; p-value = testing the null hypothesis that the mean difference is equal to zero.

8.75%, a result that shows conventional banks to plow back more profit, hence, their growth potential is higher than that of the Islamic banks in the GCC countries.

Considering the other two periods, the 2008 and the 2013–2015, do not change the conclusions found earlier in terms of statistical significance. This indicates some consistency and reliability in the obtained results.

Because the significance of the influence of the sources of profitability on bank performance may not be consistent across different performance measures and across the banking form, Table 5 presents a comparison of the effect of profitability sources on both ROA and ROE for both Islamic and conventional banks. Panel (A) presents the pooled model, while panel (B) presents the Seemingly Unrelated Regression (SUR) (or Zellner method)[4].

Remarkably, for the conventional banks, the pooled as well as the SUR methods exceedingly fit the data and all variables have a significant effect irrespective of the expected sign. Besides, the significance levels are almost the same when ROE replaces ROA. The results show that the higher the liquidity, the higher the performance of the conventional banks. Specifically, an increase by 1% in liquidity would result in an increase of ROA by about 11.5%. One would expect a negative sign as liquidity is well thought-out an idle asset, although, if it is relatively higher, it tends to reduce the operating risk of a bank. In addition, liquidity by itself scales the risk of insufficient reserves of cash in response to unexpected withdrawal requests; hence, it positively affects ROA. The effect of liquidity on profitability for Islamic banks is insignificant. One interpretation is that Islamic banks tend to link their credit to real pledged assets (i.e., the profit-loss system), which guarantees the credit in case a customer fails to service the debt. However, for Islamic banks, the effect of liquidity becomes significant when ROE replaces ROA. For this, the effect of leverage is considered, hence, more liquidity matters. This result supports the evidence established by Hussein et al. (2014) and Altamimi (2010), but contradicts the findings of Altamimi et al. (2015).

As for capital adequacy, one can note a positive coefficient value of both Equity to Assets and Deposit to Equity. The higher capital adequacy safeguards a bank from insolvency (and reduces bankruptcy costs) and as higher level of capital increases a bank lending capacity, which should lead to a higher profitability. For Islamic banks, the relation between capital adequacy and bank profitability is less confirmed, as only Deposits to Equity ratio is significant (considering ROA) and only Loan to Equity ratio is significant (considering ROE). This conclusion is in line with that of Hussein et al. (2014), but comes contrary to the evidence provided by Altamimi et al. (2015).

Bank efficiency, as proxied by the ratio of fixed assets to assets, is expected to have a positive effect on profitability. At the same time, the ratio by itself leads to the indication of a negative relation to profitability, given the financial operative feature of banks. Thus, the functional relationship between the operational efficiency and profitability is expected to be with a positive sign, a result which is illustrated by Table 5 for conventional banks. As for Islamic banks, the same relation is not supported, even after considering the ROE. These findings are supported by Hussein et al. (2014).

Table 5 reveals also that bank size (Ln of Assets) has a positive effect on profitability as banks benefit from large size to improve profit efficiency through superior combinations of inputs and outputs. This is true for conventional banks, only when considering ROA but not ROE. As for Islamic banks, the same relation seems true, only if considering ROA, but not ROE. Hussein et al. (2014) and Mollah et al. (2017) both provide evidence which is in line with these findings.

Moreover, results in Table 5 show that the bank internal growth proxy has positive effect on bank's profitability for banking forms. This is vividly expected as the more funds plowed back in the bank, the more capacity to lend or to strengthen the fi-

4 Since we have cross sectional data, and as data are structured such that we have three countries, hence, three groups, and as the popular fixed and random effect models require the number of cross sections to be larger than the number of coefficients, so the Seemingly Unrelated Regression (SUR) method is used as a reliable alternative.

Table 5. The effect of sources of profitability for banks in Kuwait, Saudi Arabia and Emirates (2011–2015)

Conventional				Islamic			
Variable	**Coef.**	**P-value**	**When ROE**	**Variable**	**Coef.**	**P-value**	**When ROE**
Panel (A) pooled model							
C	0.0587	0.0001	Same	C	0.0313	0.2283	Sig.
CTA	0.1149	0.0001	Same	CTA	0.0102	0.2875	Sig.
ETA	0.0868	0.0001	Same	ETA	0.0013	0.9608	Insig.
DTE	0.0043	0.0001	Same	DTE	0.0032	0.0286	Insig.
LTE	0.0059	0.0001	Same	LTE	0.0007	0.702	Sig.
FTA	0.5983	0.0001	Same	FTA	0.0460	0.2672	Insig.
IGR	0.0763	0.0001	Same	IGR	0.1204	0.0001	Insig.
LNTA	0.0026	0.0001	Insig.	LNTA	0.0022	0.0282	Insig.
Adj R	0.97			Adj R	0.72		
OBS	62			OBS	29		
Panel (B) SUR model							
C	0.0428	0.0003	Same	C	0.0334	0.1567	Insig.
CTA	0.1136	0.0001	Same	CTA	0.0105	0.185	Sig.
ETA	0.0983	0.0001	Same	ETA	0.0132	0.5808	Insig.
DTE	0.0036	0.0001	Same	DTE	0.0026	0.0346	Insig.
LTE	0.0049	0.0001	Same	LTE	0.0006	0.7117	Sig.
FTA	0.4967	0.0001	Same	FTA	0.0331	0.3283	Sig.
IGR	0.0741	0.0001	Same	IGR	0.1172	0.0001	Insig.
LNTA	0.0019	0.0001	Same	LNTA	0.0020	0.0241	Insig.
Adj R	0.97			Adj R	0.72		
OBS	62			OBS	29		

Note: CTA = Cash to Assets; ETA = Equity to Assets; DTE = Deposit to Equity; LTE = Loan to Equity; FTA = Fixed Assets to Assets; IGR = Internal Growth Rate (the % of end of year retained income divided by the beginning of the year bank equity fund); ROA (ROE) = Return on Assets (Equity); LNTA = Log of Total Assets. Since we have a cross-sectional data, heteroscedasticity was found to be significant. And since it is of unknown form, it was corrected by using White's (1980) consistent covariance matrix.

nancial stability of the bank, and the higher will be the profitability of the bank.

In order to obtain additional evidence on the impact of bank size, bank type, home country of the bank, and the impact of the 2008 subprime crisis on the GCC banks' profitability, a regression of bank profitability on several variables is carried out, and the results are given in Table 6. Kuwait is excluded from the home country dummy variable and Islamic banks are excluded from bank type. Therefore, "BT" is conventional banks profitability relative to Islamic banks, while Dksa and Duae are bank profitability in these countries relative to banks in Kuwait. Pooled and SUR regressions are both run to examine the robustness of the results.

The results reported in Table 6 are consistent across the two regression equations (pooled OLS and SUR). The OLS pooled regression indicates a positive and significant effect of bank size on ROA, which indicates the larger the bank, the higher its profitability (which is supported by Hussein et al. (2014) and Mollah et al. (2017)). This relation is statistically insignificant when employing the SUR regression model.

Table 6. The effect of home country, 2008 subprime crisis and bank type on bank profitability of GCC banks (2011–2015)

	OLS pooled model		SUR method	
ROA	**Coef.**	**P-value**	**Coef.**	**P-value**
C	-0.182	0.0004	0.0175	0.4828
ln (ta)	0.0071	0.0001	0.0006	0.5932
Dksa	-0.0243	0.0049	-0.0153	0.0195
Duae	-0.0071	0.1726	-0.013	0.0348
D8	-0.0054	0.5435	-0.0036	0.3477
BT	0.0196	0.0001	0.0087	0.0001
Adj R	0.1074		0.051	
OBS	339		339	

Note: ROA = Return on Assets; Ln (TA) = natural logarithm of total assets; Dksa = 1 if bank is in Saudi Arabia and 0 otherwise; Duae = 1 if bank is in Emirates and 0 otherwise; D8 = 1 if year is 2008 and 0 otherwise; BT = 1 if bank is conventional and 0 otherwise. Since we have a cross-sectional data, heteroscedasticity was found to be significant. And since it is of unknown form, it was corrected by using White's (1980) consistent covariance matrix.

Consistent with the previous results, conventional banks in the GCC countries outperform the Islamic banks. The coefficient of the OLS pooled model shows the conventional banks to outperform their Islamic counterparts by 1.96% (in ROA) and by 0.87% when considering the pooled regression method. Consistent with previous analysis, there seems to be no effect of the 2008 subprime crisis on the profitability of Islamic and conventional banks in the GCC countries, except the perceived significant shrinkage of the conventional banks' profitability, noted in Table 3. This supports the evidence by Almanaseer (2014) who concludes that there is no effect of the 2008 subprime crisis on GCC banks, but comes in contrast to the evidence of Tlemsani et al. (2016) and Hussein et al. (2014). Although Islamic banks are more involved in real estate lending, their real asset-linked credit guarantees more secured loans, hence, less effect from financial crisis.

For the country dummy variables, the results in Table 6 show that Kuwaiti banks have significantly higher ROA than that of Saudi banks. Also, Kuwaiti banks' ROA is not significantly different from that of Emirates banks (considering the OLS pooled model), but higher than that of Emirates banks by almost 1.3% (when considering the SUR model, which seems more reliable as we have cross section data).

CONCLUSION

This paper analyzes the performance of both Islamic, as well as conventional banks in GCC countries. GCC economic environment is very integrated as many economic policies are highly coordinated among GCC countries. Hence, banks in these countries represent unique set of financial institutions that operate in special environment. The paper employs different statistical analysis tools such as mean test and different regression methods in order to corroborate the results and to indorse their credibility.

The paper predominantly documents vivacious differences between Islamic versus conventional banking form with respect to bank performance. The different regression models divulge the conventional banks to outperform their Islamic counterparts, irrespective of the period and regardless of the country as well as the performance measure. Furthermore, the direct determinants of the performance differ between the two banking forms. For example, as liquidity seems to affect the performance of conventional banking form, it does not appear to be a factor in the performance function of Islamic banks. Other

factors that seem to affect bank performance of GCC banks are bank efficiency, banks size and bank growth rate. The evidence in this analysis also shows that the 2008 subprime crisis seems to affect the performance of conventional banks but not the Islamic banks in GCC countries as the plodding reduction in banks performance was more overfed for conventional banks.

REFERENCES

1. Alsaratwi, A. (2013). The governance effect on the performance of Islamic and conventional GCC banks. *Ataawun Journal, 79,* 66-90.
2. Altamimi, H., Miniaoui, H., & Elkelish, W. (2015). Financial risk and Islamic banks' performance in the gulf cooperation council countries. *The International Journal of Business and Finance Research, 9*(5), 103-112.
3. Altamimi H. (2010). Factors influencing performance of the UAE Islamic and conventional national banks. *Global Journal of Business Research, 4*(2), 1-9.
4. Almanaseer, M. (2014). The impact of the financial crisis on the Islamic banks profitability - evidence from GCC. *Journal of Business Research, 5*(3), 176-187. https://doi.org/10.5430/ijfr.v5n3p176
5. Athanasoglou, P. P., Brissimis, S. N., & Delis, M. D. (2008). Bank specific, industry specific and macroeconomic determinants of bank profitability. *Journal of International Financial Markets, Institutions and Money, 18*(2), 121-136.
6. Bank Negara Malaysia (2017). Islamic Financial Services Industry Stability Report.
7. Beck, T., Kunt, A., & Merrouche, O. (2010). Islamic vs. conventional banking business model, efficiency and stability. *Journal of Banking and Finance, 37*(2), 433-447. https://doi.org/10.1016/j.jbankfin.2012.09.016
8. Cihak, M., & Hesse, H. (2010). Islamic banks and financial stability: an empirical analysis. *Journal of Financial Services Research, 38*(2), 95-113
9. Cornett, M., Guo, L., Khaksari, Sh., & Tehranian H. (2010), The impact of state ownership on performance differences in privately-owned versus state-owned banks: an international comparison. *Journal of Financial Intermediation, 19*(1), 74-94. https://doi.org/10.1016/j.jfi.2008.09.005
10. Ernst & Young (2013). World Islamic Banking Competitiveness Report. 2013–2014: the Transition Begins.
11. Goddard, J., Molyneux, P., & Wilson, J. (2004). Dynamic of growth and profitability in banking. *Journal of Money, Credit and Banking, 36*(6), 1069-1090. https://doi.org/10.1353/mcb.2005.0015
12. Heffernan, S., & Fu, M. (2008). *The determinants of bank performance in China* (Working Paper Series, (WP-EMG-03-2008), Cass Business School, City University, UK). Retrieved from https://www.cass.city.ac.uk/__data/assets/pdf_file/0008/76949/Heffernan-45-REVISED.pdf
13. Hussein, M., Alam, M., & Wahid, M. (2014). The performance of Islamic banks during the 2008 global financial crisis: evidence from gulf cooperation council countries. Retrieved from https://ssrn.com/abstract=2517359
14. Milhem, M., & Istaiteyeh, R. (2015). Financial performance of Islamic and conventional banks: evidence from Jordan. *Global Journal of Business Research, 9*(3), 27-41.
15. Mollah, S., Hassan, M. K., Al Farooque, O., & Mobarek, A. (2017). the governance, risk-taking, and performance of Islamic banks. *Journal of Financial Services Research, 51*(2), 195-219.
16. Peters, D., Raad, E., & Joseph, S. (2004). The performance of banks in post-war Lebanon. *International Journal of Business, 9*(3), 259-286.
17. Shah, P. (2014). Performance analysis of selected Islamic and conventional banks of Pakistan through camel framework. *Business & Economic Review, 6*(1), 19-39.
18. Tlemsani, I., & Alsuwaidi, H. (2016). Comparative analysis of Islamic and conventional banks in the UAE during the financial crisis. *Asian Economic and Financial Review, 6*(6), 298-309. https://doi.org/10.18488/journal.aefr/2016.6.6/102.6.298.309