Influencing of Specific-Firm Characteristics on Islamic banks' Profitability; Evidence from Gulf Co-operation Council Countries

Abdullah Awadh Bukair
Accounting Department, Faculty of Administrative Sciences, Hadhramout University for Sciences and Technology, Yemen
bukairaaa@yahoo.com

Abstract. The Islamic banking industry is considered one of the fastest growing financial sectors in the first decade of the 21st century. The Islamic banking system operates in compliance with the codes of Islamic *Shariah*, and its profitability plays an important role in the economic growth of Gulf Cooperation Council (GCC) countries. This study aims to determine the impact of bank-specific characteristics, consisting of leverage, capitalization, operating expenses, number of branches, and bank size on profitability of the Islamic banks. After controlling for macroeconomic environment, the robust of OLS regression analysis for the panel data showed that capital adequacy, operating expenses, and number of branches are the most important determinants affecting Islamic banks' profitability in GCC countries. A health capital, a greater number of branches, and lower bank costs lead to increase profitability. Size has a positive association with the level of profits, and is just significant with return on equity (ROE). Consistent with the extant literature, the results showed that GDP per capita has a significantly positive effect on Islamic banks' profitability.

Keywords: Islamic banking, bank profitability, firm charateristics, panel data analysis

JEL: G21, C23

1 INTRODUCTION

The banking industry constitutes a primary sector of financial system influencing economic growth. The stability and development of an economy to a great extent are without doubt based on the well-functioning of its banking sector. The financial intermediation efficiency influences national economic development (Levin, 1997; Rajan and Zingales, 1998). In contrast, according to Caprio and Klingebiel (2003), bank insolvencies affect the whole country's economy negatively, and at the same time, in many cases losses increase from 10-20% of gros domestic product (GDP), and sometimes approximately 40-45% of GDP. Further, adequate earnings are necessary for banks to protect solvency, to continue, and expand in an appropriate environment (Golin, 2001).

The banking sector in the Gulf Region is regareded an of the essential part of the financial services industry, and it presents the largest sector in the GCC countries' economies. Higher and continued profitability is necessary in protecting the banking industry's stability. Therefore, a healthy profitability and small risk would raise the banks financial performance (Fraser and Fraser, 1991). In addition, the banking sector's strength is vital for governments in order to avoid negative budgetary results. A bank would not be able to absorb adverse shocks due to its weak profitability, which would influence its solvency, even if it is strong. According to Al-Khouri (2011), the banking sector in GCC countries has same features. Firstly, it is mostly dependent on oil sector activities. Secondly, it is not well diversified, wherein the primary operations are construction, real estate, and consumer loans. Finally, it is strongly protected from foreign competition, and controlled by the government.

The emergence of the Islamic banking system was established in the 1970s based on the principle of the interest-free loan. Since all transactions and activities of Islamic banks are derived from *Shariah* rules and principles, the fixed return on the capital and operations are forbidden. The all types of investments' dealings are allowed by the *Shariah* if they are in the form of profit and loss sharing, which is the main principle covering all kinds of financial transactions.

Islamic banks are required to operate under the main *Shariah* principles: profit sharing and free-interest loans. They give money to provide services to society and generate productive wealth by investment in different sectors to develop the national economy, which is the primary objective of the establishment of those banks.

In the last three decades, the Islamic banking sector has emerged as one of the fastest-growing industries in terms of numbers and size with an annual growth rate of 12-15% or higher (Rogers, 2004; Zaher and Hassan, 2001). At the end of 2009, there were more than 430 Islamic banks operating in over 75 countries throughout the world with a capital size in excess of $822 billion (Smaoui and Ben Salah, 2012). Further, the amount of Islamic investment funds was $27 billion. Consequently, the Islamic banks have extended and diversified their activities all over the world, and received broad acceptance by both Muslim and non-Muslim countries (Iqbal and Molyneux, 2005).

According to Sufian (2007), the notable growth and dominance of the Islamic banking industry are in the GCC countries. By the end of 2002, the total assets of the Islamic banks in the GCC was $226 billion, which represented 87% of the whole assets of the Islamic financial system (Olson and Zoubi, 2008).

Most of the previous studies in the conventional financial industry have found a relationship between bank attributes and profitability. However, the relationships are varied due to different countries and time periods, which necessitates additional research. Given the differences in these relationships, it is important to see whether the previous findings are applicable to the Islamic banking sector.

Knowledge of the elements that affect bank profitability is valuable for many groups of stakeholders, such as managers, investors, central banks, governments, and other financial authorities (like bankers associations). Furthermore, knowledge of these determinants would be helpful for banks authorities to put forward policies that lead to the economic union of GCC countries.

Although there have been considerable studies examining the profitability of conventional financial services, empirical research on determinants that affect the performance of the Islamic banking sector is sparse. The current study attempts to fill this gap in literature by examining the influence of the firm characteristics on the profitability of Islamic banks among GCC countries during 2009-2011.

The remainder of this paper is structured as follows: the second section reviews the related studies. Section 3 outlines research method and empirical results. The last section concludes and provides the possible avenues for future research.

2 Related studies and hypotheses development

Many studies have investigated the internal and external determinants that influence a bank's profitability within various countries, and different time periods. Majority of these studies have been done in the conventional banking sector (Sufian and Chong, 2008; Sarita, Zandi, & Shahabi, 2012; Peters, Raad, & Sinkey, 2004; Oladele, Sulaimon, & Akeke, 2012; Kosmidou, Pasiouras, & Tsaklanganos, 2007; Goddard, Molyneux, & Wilson, 2004; Badola and Verma, 2006; Athanasoglou, Delis, & Staikouras, 2006; Heffernan and Fu, 2008). In contrast, very few studies have examined the elements that affect the profitability of Islamic banks.

Among the determinants of Islamic banks' profitability, Haron (1996) found that interest rates, inflation, and size affect the profitability of both Islamic and conventional banks. Other elements that influence profitability comprise liquidity, funds deposited into current accounts, total capital and reserves, and the proportion of profit sharing (Haron, 2004). Recently, Idris *et al.* (2011) examined the effect of capital adequacy, credit risk, liquidity, size, and expenses' management on profitability of Islamic banks in Malaysia.

Only size has a positive and significant impact on profitability. In the same vein, Smaoui and Ben Salah (2012) conducted a study in the GCC countries to explore the influence of capital adequacy, liquidity, efficiency, GDP growth, and inflation on Islamic banks' profitability during 1995-2009. They used a Return on Average Assets (ROA), Return on Average Equity (ROE), and Net non-Interest Margin (NIM) as proxies for profitability. Their findings reveal that capital adequacy, size, GDP growth, and inflation have a positive impact on profitability, while cost into income ratio has a negative effect.

The current study uses five specific bank characteristics consisting of leverage, capitalization, operating expenses, number of branches, and size. It also uses one external factor in order to measure the overall macroeconomic environment, and to control the effect of external elements, namely GDP per capita.

2.1 Leverage

Islamic banks are generally operated in an environment that has a high level of risks. One of the most important asset quality indicators is the financial leverage ratio (measured by total liabilities divided by total assets). The importance of this factor is due to risks to the solvency of Islamic banks, which are usually caused by impairment of assets. Empirical evidence shows that the best-performing banks are those that have preserved a great level of liabilities accounts close to their assets (Naceur and Goaied, 2001). Raising the ratio of total liabilities means more available funds are used by the bank in order to generate various profitable resources, which would raise the ROA of the bank (Allen and Rai, 1996; Holden and El-Bannany, 2004). Hence, the following hypothesis is developed:

H1: There is a positive relationship between leverage and a bank's profitability.

2.2 Capitalization

Capital can be defined as the amount of funds owned by banks to support their business operations, and it works as a safety channel in order to face the negative occurrences (Athanasoglou, Brissimis, & Delis, 2005). Capitalization factor (measured by total equity to total assets) is considered an important factor in explaining the performance of the banking industry (Sufian and Chong, 2008). It is expected to have a positive impact on profitability, because it expands the banking products and services, and at the same time, improves the cash flow and ability of profit-generating. A high degree of equity would reduce the capital cost (less risky), and therefore, raise profitability of the bank (Bourke, 1989; Molyneux, 1993). Furthermore, an increase in capital may lead to increase earnings by decreasing the possible financial distress' costs in terms of bankruptcy (Berger, 1995).

Empirical prior studies provide evidence for the strong positive association between capitalization variable and bank profitability (Berger, 1995; Goddard, Molyneux, & Wilson, 2004). With regards Islamic banks, Bashir (2003) and Smaoui and Ben Salah (2012) found that the higher the ratio of capital equity to total aseets, the higher the profitability. Accordingly, the following hypothesis is stated based on the resuts of previous studies:

H2: There is a positive association between capitalization and a bank's profitability.

2.3 Operating Expenses

Operating expenses of the banking system is an important factor affecting profitability, since it provides information related to operation costs, such as the total amount of wages and salaries, investment costs, and the daily cost of branch offices. According to Kosmidou (2008), the bank's poor expenses factor is considered one of the primary elements of weak profitability. Most of the literature highlights the fact that decreased expenses improve the efficiency, and therefore, increase the banks' profitability (Sufian and Parman, 2009), suggesting an adverse relationship between the ratio of operating expenses and profitability performance (Badola and Verma, 2006; Bourke, 1989; Oladele et al., 2012; Sufian and Chong, 2008). Nonetheless, Molyneux and Thornton (1992) observed a positive association, indicating that great profits earned by companies may be appropriated in the form of higher payroll expenditures paid to generate more productive

human capital. However, it would be useful to determine the expected impact in a developing banking sector as that found among the GCC countries. Hence, with regards the above discussion, the following hypothesis is developed:

H3: There is a negative relationship between operating expenses and a bank's profitability.

2.4 Number of Branches

The number of Islamic bank branches can be defined as the total of branch offices, and sub-branch offices. It is used as a proxy for a bank's location (consumers' accessibility to Islamic banks). In order to inrease competition, and to reduce the possibility of a bank's failure, the authorities in the GCC have set the minimum standards for banks in terms of establishing branches, including among others requirements, a minimum capital retention, and a minimum age of a bank (10) years (Jabsheh, 2002). The literature suggests that banks with a larger number of branches are expected to provide better services, indicating they would have more profitability (Al-Tamimi, 2010). In the context of Islamic banks in GCC countries, it is reasonable to expect that the effect on profitability is fully achieved, because the growth of bank branches regularly raised the real level of deposit.

H4: There is a positive association between the number of branches and a bank's profitability.

2.5 Bank Size

One determinant of a bank's profitability is the firm size. Boyd and Runkle (1993) found that the bank size to be associated with the economic scale. According to Smaoui and Ben Salah (2012), Idris et al. (2011), and Bashir (2003), bank size is a very important factor affecting the profitability level of Islamic banks. This is because an increase in a bank's size would lead to a reduction in information gathering cost, and consequently, maximize profitability. However, although Wasiuzzaman and Tarmizi (2010) and Athanasoglou, Brissimis and Delis (2005) found no relationship between Islamic banks' size and profitability, Haron (1996) found a negative association. Accordingly, the following hypothesis is developed:

H5: There is a positive relationship between size and a bank's profitability.

2.6 Economic Conditions

The Gross Domestic Product (GDP) per capita is used to control the development level of a country's economy (Samuelson and Nordhaus, 1989), and is widely employed as a measure of the quality of overall institutional environment. In addition, GDP is used as a primary determinant of the national economic performance of a country. It is considered one of the external factors of banks' profitability, indicating a positive association between the economic growth and the financial sector development (Beck et al., 2008; Levine and Zevros, 1998; Tang, 2006; Wang ,2009).

Many studies have examined the influence of economic growth on profitability of the bank. While Sufian and Habibuallah (2010), Pasiouras and Kosmidou (2007), and Wasiuzzaman and Tarmizi (2010) have found a positive relationship between economic growth and a bank's profitability, Ben Naceur and Goaied (2006) and Athanasoglou et al. (2006) did not find any correlation. With repect Islamic banks of the GCC countries, Srairi (2009) found a positive relationship between the real gross domestic product and the bank's profitability measured by ROA. This result is supported by Smaoui and Ben Salah (2012) who found that GDP has a positive effect on the Islamic banks' profitability measured by ROA and ROE.

3 Medhodology

3.1 Data collection

The study employed year bank level data of 45 Islamic banks of the GCC countries during 2009-2011. The data related to profitability and the banks' specific characteristics are collected from financial statements. The data for GDP per capita is obtained from Deloitte (http://deloitte.com). The 45 Islamic banks are sellected based on the list of Islamic financial institutions on the website of AIBIM (http://aibim.com) and AAOIFI (http://aaoifi.com). This produced a balanced panel data of 135 bank-year observations.

3.2 Empirical model and variables measures

3.2.1 Profitability measures

In the literature of the banking sector, according to Iqbal and Molyneux (2005), return on assets (ROA) and retun on equity (ROE) are the two measures of profitability which are employed in this study.

Return on assets (ROA)

ROA is the ratio of a bank's net after-tax income divided by its assets. It demonstrates the ability of the management in using the financial resources to generate profits (Hassan and Bashir, 2003; Samad, 1999). It is considered one of the best factors for measuring the efficiency of a company to generate profits from its assets (Rivard and Thomas, 1997). The ROA of a bank is based on the bank's policy plus the uncontrollable components of economic decisions and government regulations.

Return on equity (ROE)

ROE is the ratio of a bank's net after-tax income divided by its total equity capital. It shows the bank's management effectiveness in using the funds of shareholders to increase the net profit. According to Hassan and Bashir (2003), most banks greatly use financial leverage to raise their ROE to a competitive level. The ROE of a bank is influenced by its ROA and its ratio of capital adequacy (Bashir, 2003).

3.2.2 The Bank Specific Characteristics

This study contains five variables of bank characteristics consisting of leverage, capitalization, operating expenses, number of branches, and size in the regression models after controlling the economic conditions factor, namely GDP per capita.

Leverage (LATA)

Growth in total liabilities requires Islamic banks to manage them appropriately in order to repay money or money's worth at a later date. There is evidence that performance of the Islamic banks is improved because their assets increase at a higher level than liabilities, which confirms the view of a number of researchers that Islamic banks are more equity financed (Siraj and Pillai, 2012). Leverage is utilized to measure the risk, as a ratio of liabilities to total assets. A study of leverage contributes to understanding risk-taking by a bank in order to maximize its profits. A higher ratio of leverage would increase ROE as a measure of the bank's profitability (Bashir, 2003). A great risk-taking by a bank may lead to insolvency risks.

Capitalization (ETA)

This is used to measure the bank capital adequacy, which presents the ratio of equity to total assets. A health capital structure is crucial for the banking sector in order to develop economies. This is because the strength of capital adequacy resists the assets' losses (Samad, 2004), and ensures depositors' funds in changeable macroeconomic

environments, indicating a high bank's profitability. In addition, the lower ratio of capitalization leads to a great leverage and risk and therefore, more costs of borrowing. Hence, the bank health capitalization results in higher profitability.

Operating expenses (OETA)

The ratio of operating expenses to total assets is used to measure the costs of running the bank, comprising staff salaries and benefits, as well as the cost of branch office services. It reflects the ability of an Islamic bank's management to control costs effectively. The use of new technology, such as ATMs and online accounts leads to the bank becoming more productive and efficient, and therefore, reducing operating expenses, which leads to an increase in the level of profits.

Number of Branches (BRANCH)

Number of branches is used to measure the network of a bank. Sung-Ryong Lee (1985 cited by Weon, Eui, & Sik, 2010, p. 23) found that a bank's network influences the level of deposits and the profit. Furthermore, he documented that the growth in number of branches in other financial institutions leads to an improvement in the level of the bank's profits in that region. This result is supported by Al-Tamimi (2010) who found the same effect on profitability of Islamic banks in UAE. An increase in the branches of a bank would improve the bank's services, which leads to maximization of the level of profits.

Bank Size

Bank size is measured by log total assets. According to Bashir (2003), banks in rich countries, like the GCC countries are bigger in size. A lagre size is likely to support scale economies and reduce the cost of collection and processing data (Boyd and Runkle, 1993). Larger banks offer a great menu of financial products and services to their clients, and therefore, mobilize additional funds (Bashir, 2003).

Economic Conditions

The GDP per capita GDPPC is used to measure the total economic activity in a country. It is mostly used to measure the quality of institutional's environment. It is likely to affect a lot of factors pertaining to the supply and demand for bank loans and deposits. Most likely, high income eaners tend to save more money, and Islamic banks would be able to raise additional funds, which enables them to finance more investments and hence, increase the level of profits. Previous studies have found that GDPPC has a positive and significant effect on the private saving behavior in developed countries (Masson, Bayoumi, & Samiei, 1998). This result is supported by the study of Sufian and Habibullah (2010) which found a correlation between economic growth and performance of the banking industry.

Table 1. Definition, Measures and Expected Sign.

Variables	Description	Notation	Expected Sign
Dependent			
Profitability	Return on Assets	ROA	
	Return on Equity	ROE	
Independent			
Leverage	Liabilities/total assets	LATA	+
Capitalization	Equity/total assets	ETA	+
Operating Expenses	Operating expenses/total assets	OETA	-
Number of Branches	Number of branches	BRANCH	+
Bank Size	Log (total assets)	SIZE	+
Economic Conditions	GDP per capita	GDPPC	+

With regards Islamic banks, Zantioti (2009) found GDP per capita to be one of the most important determinants in a bank's profitability. This finding was confirmed by Smaoui and Ben Salah (2012), who showed that the growth of GDP influences the profitability of Islamic banks in GCC countries. In the same vein, Srairi (2009) reported that the real GDP in the GCC region affects the level of profits for both Islamic and conventional banks.

Table 1 displays the definitions, measures and the expected sign of the independent variables on profitability of the bank.

3.3 Multivariate Regressions

To test the hypotheses of determinants on profitability of the Islamic banks, the study estimates the following equation of time-series cross-sectional:

$$\text{Profitability}_{it} = \beta 0 + \beta 1*\text{LATA} + \beta 2*\text{ETA} + \beta 3*\text{OETA} + \beta 4*\text{BRANCH} + \beta 5*\text{SIZE}, + \beta 6*\text{GDPPC} + \alpha i + \mu it \quad (1)$$

where:
α = the Islamic Bank (i=1…..n);
t = the time indicator that is equal to the number of years (t=1…..t)
Profitability = ROA or ROE.
LATA = Liabilities to total assets ratio
ETA = Total equity to total assets ratio
OETA = Operating expenses to total assets ratio
BRANCH = Number of branches
SIZE = Log (total assets)
GDPPC = GDP per capita
μit = the error term

Further, this study tested the assumptions of autocorrelation, normality, heteroscedasticity and multicollinearity. The assumptions of multicollinearity was tested using the Pearson correlation matrix. In addition, it tested the other assumptions by conducting the analysis of Durbin-Watson, skewness and kurtosis, as well as White tests. The Normal scores were used to transform the data.

3.3.1 Main Empirical Findings

Descriptive Statistics

Table 2 provides summary statistics for the dependent and independent variables employed in the current study.

Table 2. Summary statistics of dependent and independent variables.

Variables	Mean	Man.	Max.	Std. Dev.	Med.	Skewness	Kurtosis	Shapiro-Wilk	
								Z	Pro.
ROA	-.030	-.59	.218	.103	.003	-2.445	11.273	7.623	.000
ROE	-.072	-3.01	.323	.3586	.014	-5.131	.359	8.803	.000
LATA	.471	.002	.911	.3224	.471	-.049	.322	5.750	.000
ETA	.427	.084	.998	.3231	.264	.631	.323	6.567	.000
OETA	.051	.004	.54	.0637	.031	4.552	.0637	8.631	.000
BRANCH	34.53	0	496	84.504	5	3.894	84.504	8.923	.000
SIZE $b	7160.2	12.086	12.6e-06	1.57e-06	1255	4.422	1.570	9.008	.000
GDPPC $	25215	12950	62330	12811	17390	1.242	12811	7.090	.000

The mean ROA for the whole sample is 3.01 %, whereas the mean ROE is 7.24%. These results show that for each $100 turnover of the sampled banks, $0.30 and $1.40 (median) are the return earned respectively. The two performance accounting

measures show that Islamic banks have a very low profitability. The lower revenues may be influenced by a higher leverage ratio (liabilities divided by total assets) of the bank. For instance, the mean leverage (LATA) for the whole sample is 47.11%. Furthermore, the lower returns for the Islamic banks may be a high bank tax on their earnings, which has an important negative effect on profitability.

Table 3 reports the correlation matrix between the independent variables. The findings show that there is a negative correlation between leverage (LATA) and capitalization (ETA), and between leverage and operating expenses (OETA) as well. However, size has a positive correlation with all variables except capitalization and operating expenses. These results suggest that larger Islamic banks tend to have a higher ratio of leverage in the lower capital and operating expenses' ratio. Further, the findings suggest that small banks have a great capital adequacy and operating expenses too. Furthermore, the results indicate that most Islamic banks have a negative growth in capital adequacy, which implies that banks with a high leverage have a low capital growth.

Table 3. Correlation matrix for the independent variables.

Variables	LATA	ETA	OETA	BRANCH	SIZE	GDPPC
LATA	1.0000					
ETA	-0.7645	1.0000				
OETA	-0.2044	0.3619	1.0000			
BRANCH	0.2117	-0.3572	-0.1444	1.0000		
SIZE	0.5690	-0.7848	-0.4207	0.4578	1.0000	
GDPPC	0.0727	-0.2100	0.0126	-0.1195	0.3164	1.0000

OLS Findings and Discusion

Table 4 and 5 display the assumption of multicollinearity.

Table 4. OLS regressions findings using ROA.

Variables	(1) Fixed effects	(2) Random effects	(3) OLS	(4) Fixed effects	(5) Random effects	(6) OLS	Multicollinearity	
							Tole.	VIF
Constant	-0.198	-0.179	-0.169	-0.182	-0.126	-0.108		
	(-0.58)	(-1.40)	(-1.56)	(-0.54)	(-1.07)	(-1.04)		
LATA	-0.007	-0.014	-0.013	0.003	0.009	0.012	0.391	2.56
	(-0.06)	(-0.33)	(-0.37)	(0.02)	(0.22)	(0.34)		
ETA	0.202	0.051	0.043	0.208	0.060	0.055	0.230	4.35
	(1.19)	(0.91)	(0.92)	(1.24)	(1.17)	(1.25)		
OETA	-0.981***	-0.981***	-0.868***	-0.993***	-0.965***	-0.972	0.770	1.30
	(-5.27)	(-6.67)	(-6.85)	(-5.36)	(-7.49)	(-7.89)		
BRANCH	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.687	1.46
	(0.18)	(0.41)	(0.46)	(0.08)	(1.47)	(1.81)		
SIZE	0.022	0.029	0.027*	0.006	0.008	0.005	0.281	3.56
	(0.43)	(1.66)	(1.86)	(0.12)	(0.47)	(0.34)		
GDPPC				2.97e-06	2.38e-06***	2.42e-06***	0.7502	1.33
				(1.32)	(3.38)	(3.91)		
R^2	0.2516	0.2373	0.6313	0.2669	0.2455	0.4293		
***F*-statistic**	5.72***		14.59***	5.10***		16.05***		
Wald x^2		61.13***			80.78***			
X^2	1.88***			1-53**				
No. of Obser.	135	135	135		135	135		

***, **, and * indicates significance at 1, 5, and 10% levels, respectively.

Table 5. OLS regressions findings using ROE.

Variables	(1) Fixed effects	(2) Random effects	(3) OLS	(4) Fixed effects	(5) Random effects	(6) OLS	Multicollinearity	
							Tole.	VIF
Constant	-1.359	-1.235**	-1.142***	-1.318	-1.094**	-0.965**		
	(-1.06)	(-2.39)	(-2.67)	(-1.03)	(-2.19)	(-2.29)		
LATA	-0.008	-0.119	-0.115	0.019	-0.057	-0.043	0.391	2.56
	(-0.02)	(-0.69)	(-0.82)	(0.04)	(-0.34)	(0.31)		
ETA	1.356**	0.425*	0.364**	1.374**	0.448**	0.400**	0.230	4.35
	(2.12)	(1.87)	(1.97)	(2.15)	(2.05)	(2.22)		
OETA	-1.890***	-1.546***	-1.452***	-1.923***	-1.738***	-1.756***	0.770	1.30
	(-2.68)	(-2.93)	(-2.90)	(-2.73)	(-3.32)	(-3.51)		
BRANCH	0.0003	0.0003	0.0003	0.0002	0.0006	0.0007*	0.687	1.46
	(0.37)	(0.76)	(0.89)	(0.29)	(1.41)	(1.83)		
SIZE	0.129	0.179	0.167***	0.087	0.122*	0.102*	0.281	3.56
	(0.69)	(0.0700)	(2.86)	(0.45)	(1.70)	(1.66)		
GDPPC				8.06e-06	6.83e-06**	7.06e-06***	0.750	1.33
				(0.94)	(2.27)	(2.81)		
R^2	0.1413	0.1069	0.1773	0.1503	0.1071	0.2250		
***F*-statistic**	2.80**		14.54***	2.48**		18.87***		
Wald x^2		22.30***			28.69***			
X^2	2.22***			2.00***				
No. of Obser.	135	135	135		135	135		

.***, **, and * indicates significance at 1, 5, and 10% levels, respectively.

Table 4 and 5 show that the variance inflation factor (VIF) is lower than 4 and Tolerence Values are less than 0.80, which suggest that there is no serious multicollinearity problem in both models (Haniffa and Cooke, 2005; Naser, Al-Hussaini, Al-Kwari, & Nuseibeh, 2006). With regards the autocorrelation test, the regression models demonstrate that the values according to Durbin-Watson's table are acceptable. Because of the existence of heteroscedasticity, the study used robust of OLS regression.

The findings of the panel data models with each of the profitability proxies for the whole sample of observations during 2009-2011are shown in tables 6 and 7. The regression models are highly significant at less than the 0.01 level. The results do not find any an important association between leverage (LATA) and the bank's profitability, which rejected hypothesis 1. This indicates that an increase in total liabilities does not lead to raise the level of profits, because Islamic banks may rely more on their capital equity than the external funds. Hence, financial leverage does not appear to be a major determinant of a bank's profitability. This finding is consistent with the studies of Bashir (2003) and Idris et al. (2011).

The results show that capitalization (ETA) has a significantly positive correlation with profitability of the bank, which supports hypothesis 2. This finding indicates that a high capital adequacy leads to a reduction in the need for outside funds, and therefore, maximizes the bank's profitability. The result of capitalization is consistent with previous studies by Islamic banks (Bashir, 2003: Smaoui and Ben Salah, 2012).

The result demonstrates a negative significant relationship at less than the 0.01 level, indicating that operating efficiency of expenses is one of the most important determinants of profitability of Islamic banks. This finding confirms H3. Previous studies of Badola and Verma (2006), Bourke (1989), Oladele et al. (2012), and Sufian and Chong (2008) also support this negative association.

The results also show that there is a positive and highly significant correlation between the number of branches (BRANCH) and profitability of the bank, which supports H4. This finding is consistent with the extant literature that indicates that Islamic banks with a larger number of branches are likely to have more clients, and therefore, achieve higher levels of profitability (see, for example, Al-Tamimi, 2010).

Table 6. OLS regression findings using ROA with robust.

Variables	Sign. Exp.	Coef.	Std. Err.	t	*P*-value
Constant		.1084138	.0995785	-1.09	0.278
LATA	+	.0115175	.0154983	0.74	0.459
ETA	+	.0554298	.0332297	1.67	0.098*
OETA	-	-.9718818	.1674044	-5.81	0.000***
BRANCH	+	.0001782	.0000574	3.10	0.002***
SIZE	+	.0050738	.0145435	0.35	0.728
GDPPC	+	2.47e-06	6.62e-07	3.66	0.000***
R^2	0.4293				
Adjusted R^2	0.4025				
***F*-statistic**	16.05				
***p*-value**	0.0000***				
No. of observation	135				

.***, **, and * indicates significance at 1, 5, and 10% levels, respectively.

The bank size has a positive and significant association with ROE at the 0.10 level, while it has a positively insignificant effect on ROA. This result supports H5. This variable is seen as an important determinant that affects the level of profits by Islamic banks of GCC countries. This result is in line with the studies of Athanasaglou et al. (2006), Camilleri (2005), and Flamini, Mcdonald, & Schumacher (2009), which found a positive association between size and a bank's profitability.

Table 7. OLS regression findings using ROE with robust.

Variables	Sign. Exp.	Coef.	Std. Err.	t	*P*-value
Constant		-.9647784	.4210658	-2.29	0.024**
LATA	+	-.0430072	.1383661	-0.31	0.756
ETA	+	.3994743	.1801277	2.22	0.028**
OETA	-	-1.756047	.4996269	-3.51	0.001***
BRANCH	+	.0007291	.0003984	1.83	0.070*
SIZE	+	.1016969	.0614393	1.66	0.100*
GDPPC	+	7.06e-06	2.52e-06	2.81	0.006***
R^2	0.2250				
Adjusted R^2	0.1887				
***F*-statistic**	6.19***				
***P*-value**	0.0000***				
No. of observation	135				

.***, **, and * indicates significance at 1, 5, and 10% levels, respectively.

With regards control variable, there is a positive and significant correlation between GDP per capita (GDPPC) and profitability of the bank, which is consistent with previous studies (Pasiouras and Kosmidou, 2007; Sufian and Habibuallah, 2010; Wasiuzzaman and Tarmizi, 2010; Wum, Chen, & Shiu, 2007). This result suggests that

growth in GDP per capita by a country would support the development of the financial industry, which leads to maximization of the profitability levels for the Islamic banks.

3.3.2 Further Analyses

In addition, the study uses the least square dummy variable model (LSDV) in order to examine the effect of time and country. Table 8 shows that time improves the results of the explanatory variables related to ROE, while it has a small effect on capitalization (ETA) regards ROA. Table 9 displays that country has to miss capitalization its significant related to ROA, whereas bank size also to be insignificant regards ROE.

Table 8. The time effect on Islamic banks' profitability

Independent variables	Predict sign	Dependent variables ROA Coef.	t-Stat	*p*-Value	ROE Coet.	t-Stat	*p*-Value
LATA	+	0.0078	0.45	0.656	-0.0557	-0.70	0.487
ETA	+	0.0530	1.61	0.110	0.3903	2.35	0.020**
OETA	-	-0.9341	-5.82	0.000***	-1.6146	-3.01	0.003***
BRANCH	+	0.0002	2.86	0.005***	0.0007	2.64	0.009***
SIZE	+	0.0083	0.61	0.543	0.1127	2.23	0.028**
GDPPC	+	2.27E-06	3.60	0.000***	6.58e-06	3.10	0.002***
_Iyear_2010		-0.0242	-1.54	0.127	-0.1105	-1.38	0.170
_Iyear_2011		0.0173	1.07	0.286	0.0532	1.20	0.233
R^2			0.4561			0.2608	
Adjusted R^2			0.4216			0.2138	
S.E.			0.0783			0.3180	
***F*-statistic**			14.23			5.06	
***P*-value**			0.0000			0.000	
No. of observation			135			135	

***, **, and * indicates significance at 1, 5, and 10% levels, respectively.

Table 9. The country effect on Islamic banks' profitability

Independent variables	Predict sign	Dependent variables ROA Coef.	t-Stat	*p*-Value	ROE Coet.	t-Stat	*p*-Value
LATA	+	0.0120	0.37	0.709	-0.1225	-0.75	0.447
ETA	+	0.0348	0.91	0.363	0.2854	2.14	0.034**
OETA	-	-1.0155	-6.90	0.000***	-1.8190	-3.42	0.001***
BRANCH	+	0.0002	2.75	0.007***	0.0006	2.91	0.004***
SIZE	+	-0.0111	-0.70	0.486	0.0525	0.98	0.330
GDPPC	+	2.92E-06	1.38	0.169	7.24e-06	1.72	0.089*
Qatar		0.0151	0.26	0.796	0.0442	0.32	0.751
Saudi Arabia		0.0608	3.20	0.002***	0.2103	2.45	0.016**
Kuwait		-0.0066	-0.17	0.865	0.0095	0.09	0.928
UAE		-0.0105	-0.21	0.835	0.0811	0.61	0.545
R^2			0.4535			0.2442	
Adjusted R^2			0.4095			0.1832	
S.E.			0.7915			0.32415	
***F*-statistic**			15.88			4.01	
***P*-value**			0.0000			0.0001	
No. of observation			135			135	

***, **, and * indicates significance at 1, 5, and 10% levels, respectively.

4. Conclusion

The fast growth in the Islamic financial industry motivates researchers to understand the factors influencing profitability of Islamic banks. The study uses balanced panel data for 45 Islamic banks of GCC countries during 2009-2011. The primary objective of this study is to examine the effect of leverage, capitalization, operating expenses, number of branches, and size on banks' profitability.

The study confirms most hypotheses after controlling the macroeconomic environment variable; GDP per capita. An interesting result is that capitalization growth, measured by the ratio of equity to total assets, has a positive and significant effect on Islamic banks' profitability. This supports the extant literature arguments that banks with a high capital have lower outside financing cots, and therefore, reduce their costs and maximize their profitability (Athanasoglou et al., 2008; Heffernan and Fu, 2008; Demirguc-Kunt and Huizinga, 1999; Kosmidou et al., 2007; Pasiouras and Kosmidou, 2007; Smoui and Ben Salah, 2012). The findings also show that the proportion of operating expenses significantly and negatively influences the profitability of Islamic banks. This suggests that profitable banks have a good management that could reduce operating expenses efficiently (Smoui and Ben Salah, 2012). The number of branches has a positive and significant effect on profitably, and is considered one of the most important determinants of Islamic banks' profitability. This indicates that banks with a larger number of branches would improve their products and services, reduce management costs, and increase the level of profits (Al-Tamimi, 2010) .

The effect of size, measured by log total assets, has a positive and significant correlation with ROE, and positively insignificantly with ROA. This suggests that larger banks have lower bankruptcy cost, and a higher level of profits (Zeitun and Tian, 2007). Further, bigger Islamic banks would offer a wide range of financial products and services at a lower level of costs (Smoui and Ben Salah, 2012). Furthermore, the influence of leverage (LATA) on profitability of the bank is insignificant, indicating that an increase in liabilities will never affect ROA and ROE of Islamic banks in the GCC countries. This result is in contrast with the study by Bashir (2003), which suggests that high liabilities would lead to more investments, and therefore, an increase the level of profits.

With regards control variable of the macroeconomic environment, the results show that GDP per capita has a positive and significant impact on Islamic banks' profitability. Because people in GCC region have a high-income level compared with other Middle East countries, they tend to save more money, so banks would invest more, which leads to an increase in the level of profits.

To conclude, the findings of determinants of Islamic banks' profitability are similar to the results that are found in the conventional banking industry, showing that the methods and approaches used in the previous studies in the conventional financial sector are possibly appropriate for the Islamic banking.

References

AAOIFI (2012). *AAOIFI Members*. Retrieved 15 November, 2012 from http://www.aaoifi.com/aaoifi/Members/AAOIFIMembers/tabid/233/language/en-US/Default.aspx

AIBIM (2012). *AIBIM Financial Institutions, Islamic Financial Institutions*. Retrieved 17 November, 2012 from http://aibim.com/component/option,com_bookmarks/Itemid,99999999/mode,0/catid,5/navstart,0/search,search../

Al-Khouri, R. (2011). Assessing the Risk and Performance of the GCC Banking Sector. *International Research Journal of Finance and Economics*, 65, 72-81.

Allen, L. and RAI A. (1996). Operational Efficiency in banking: An international comparison. *Journal of banking and finance*, 20, 655-672.

Al-Tamimi, H. A. H. (2010). Factors Influencing Performance of the UAE Islamic and Conventional National Banks. *Global Journal of Business Research*, 4(2), 1-9.

Athanasoglou, P., Brissimis, S. N. & Delis, M. D. (2005). *Bank-Specific, Industry-Specific and Macroeconomic Determinants of Bank Profitability*. Working Paper, No 25, Bank of Greece.

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.

Athanasoglou, P, Delis, M., & Staikouras, C. (2006). *Determinants of bank profitability in the South Eastern European Region.* Munich Personal RePEc Archive, Paper No. 10274, pp. 1-31.

Badola, B. S. and Verma, R. (2006). Determinants of Profitability of Banks in India: A Multivariate Analysis. *Delhi Business Review, 7(2), 79-88.*

Bashir, A. H. (2003). Determinants of profitability in Islamic banks: Some evidence from the Middle East. *Islamic Economic Studies*, 11(1), 31−57.

Beck, T., Demirguc-Kunt, A., Laeven, L., & Levine, R. 2008). Finance, Firm Size, and Growth. *Journal of Money, Credit & Banking (Blackwell)*, 40(7), 1379-1405.

Ben Naceur, S., & Goaid, M. (2006). *The determinants of commercial bank interest margin and profitability: Evidence from Tunisia*. SSRN Working Paper Series, No: 856365.

Berger, A. N. (1995) The relastionship between capital and earnings in banking, *Journal of Money, Credit and Banking*, Vol. **27**(2), 404-431.

Bourke, P. (1989). Concentration and other determinants of bank profitability in Europe, North America and Australia, *Journal of Banking and Finance*, 13, 65-79.

Boyd, J.H. & Runkle, D. E. (1993). Size and performance of banking firms: Testing the predictions of theory. *Journal of MonetaryEconomics, 31,* 47-67.

Camilleri, S. J. (2005). An Analysis of the Profitability, Risk and Growth Indicators of Banks Operating in Malta. *Bank of Valletta Review*, 31, 32-48.

Caprio, G. and Klingebiel, D. (2003). *Episodes of Systemic and Borderline Financial Crises*. World Bank, January, available at http://econ.worldbank.org/view.php?type=18&id=23456

Deloitte (2013). *GCC Powers of Construction GCC Countries Fact Sheets (2010)*. Retrieved February, 22, 2013 from http://www.deloitte.com/assets/Dcom

Demirguc-Kunt, A. and Huizinga, H. (1999). Determinants of commercial bank interest margins and profitability: some international evidence. *The World Bank Economic Review*, 13(2), 379-408.

Flamini, V., Mcdonald, C., & Schumacher, L. (2009). *The determinants of commercial bank profitability in Sub-Saharan Africa.* IMF Working Paper, 1-30.

Fraser, L. M. and Fraser, D. R. (1991). *Evaluating Commercial Banks Performance: A Guide to Firm Analysis*. Probus Professional Publication.

Goddard, J., Molyneux, P., & Wilson, J. (2004). The profitability of European banks: A cross-sectional and dynamic panel analysis. *The Manchester School*, 72(3), 363-381.

Golin, J. (2001). *The Bank Credit Analysis Handbook: A Guide for Analysts, Bankers and Investors*. John Wiley & Sons (Asia) Pre Ltd.

Haniffa, R. & Cooke, T. (2005). The Impact of Culture, Governance on Corporate Social Reporting. *Journal of Accounting and Public Policy*, 24(5), 391-430.

Haron, S. (1996). Competition and other external determinants of the profitability of Islamic banks. *Islamic Economic Studies*, *4*(1), 49-66.

Haron, S. (2004). Determinants of Islamic bank profitability. *Global Journal of Finance and Economics*, *1*(1), 1-22.

Hassan, M. K. & Bashir, A. H. M. (2003). Determinants of islamic banking profitability. *Paper presented at the Economic Research Forum (ERF) 10th Annual Conference*, Marrakesh, Morocco, 16-18 December.

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.

Holden, K. & El-Bannany, M. (2006). Investment in Information Technology Systems and Other Determinants of Bank Profitability in the UK. *RAFE*, 14(5), 361-365.

Idris, A. R., Asari, F. F. A. H, Taufik, N. A. A., Salim, N. J., Mustaffa, R., & Jusoff, K. (2011). Determinants of Islamic Banking Institutions' Profitability in Malaysia. *World Applied Sciences Journal 12 (Special Issue on Bolstering Economic Sustainability)*, 1-7.

Iqbal, M., & Molyneux, P. (2005). *Thirty years of Islamic banking: history, performance and prospects*. Palgrave Macmillan, New York.

Jabsheh F. Y. (2002). The GATS Agreement And Liberalizing: The Kuwaiti Banking Sector. *ERF, 8th Annual Conference*, Egypt.

Kosmidou, K., Pasiouras, F., & Tsaklanganos, A. (2007). Domestic and multinational determinants of foreign bank profits: The case of Greek banks operating abroad. *Journal of Multinational Financial Management*, 17, 1-15.

Levine, R. & Zevros, S. (1998). Stock markets, banks, and economic growth. *American Economic Review*, *88*(3), 537-558.

Masson, P. R., Bayoumi, T., & Samiei, H. (1998). International Evidence on the Determinants of Private Saving. *The World Bank Economic Review* 12(3), 483-501.

Molyneux, P. & Thornton, J. (1992). Determinants of European bank profitability: A Note. *Journal of Banking and Finance*, *16*(6), 1173-1178.

Naceur, S. B. & Goaied M. (2001). The determinants of the Tunisisian deposit banks' performance", *Journal of Applied Financial Economoics*,11, 317-319**.**

Naser, K., Al-Hussaini, A., Al-Kwari, D., & Nuseibeh, R. (2006). Determinants of Corporate Social Disclosure in Developing Countries: The Case of Qatar. *Advances of International Accounting*, 19, 1-23.

Oladele, P. O., Sulaimon, A. A., & Akeke, N. I. (2012). Determinants Of Bank Performance In Nigeria. *International Journal of Business and Management Tomorrow*, 2(2), 1-4.

Olson, D. & Zoubi, T. A. (2008). Using accounting ratios to distinguish between Islamic and conventional banks in the GCC region. *The International Journal of Accounting*, 43(1), 45-65.

Pasiouras, F. and Kosmidou, K. (2007). Factors influencing the profitability of domestic and foreign commercial banks in the European Union. *Research in International Business and Finance*, *21*(2), 222-237.

Peters, D., Raad, E., & Sinkey, F. J. (2004). The performance of banks in post-war Lebanon. *International Journal of Business*, 9(3), 259-286.

Rajan, R. G. & Zingales, L. (1998). Financial dependence and growth. *American Economic Review 88*, 559–586.

Rivard, R. J. & Thomas, C. R. (1997). The effect of interstate banking on large bank holding company profitability and risk. *Journal of Economics and Business*, *49*, 61–76.

Rogers, J. (2004). *Technical Assistance for the Development of International Prudential Standards for Islamic Financial Services.* Asian Development Bank, TAR: OTH 38165.

Samad, A. (2004). Performance of interest-free islamic banks vis-à-vis interest-based conventional banks of Bahrain. *IIUM Journal of Economics and Management*, 12(2), 1-15.

Samuelson, P. A. & Nordhaus, W. D. (1989). *Economics* (Thirteenth Ed.). McGraw Hill Book Company, New York, p. 102-120.

Sarita, B., Zandi, G. R., & Shahabi, A. (2012). Determinants of Performance in Indonesian Banking: A Cross-Sectional and Dynamic Panel Data Analysis. *International Journal of Economics and Finance Studies*, 4(2), 41-55.

Smaoui, C. & Ben Salah, A. (2012). Profitability of Islamic Banks in the GCC Region. *Global Economy and Finance Journal*, 5(1), 85-102.

Srairi, S. A. (2009). Factors influencing the profitability of conventional and Islamic banks in GCC Countries. *Review of Islamic Economics*, *13*(1), 5-30.

Siraj, K. K. & Pillai, P. S. (2012). Comparative Study on Performance of Islamic Banks and Conventional Banks in GCC region. *Journal of Applied Finance & Banking*, 2(3), 123-161.

Sufian, F. (2007). The efficiency of islamic banking industry in Malaysia: foreign vs domestic banks. *Humanomics: The International Journal of Systems and Ethics*,23, 174-192.

Sufian F. & Chong R. R., (2008). Determinants of bank profitability in a developing economy: empirical evidence from the Philippines. *Asian academy of management journal of accounting and finance*; AAMJAF, 4(2), 91–112.

Sufian, F., & Habibullah, M. S. (2010). Accessing the impact of financial crisis on bank performance. *Asean Economic Bulletin*, *27*(3), 245-262.

Tang, D. (2006). The effect of financial development on economic growth: evidence from the APEC countries, 1981–2000. *Applied Economics***,** 38(16), 1889-1904.

Wang , F. (2009). Financial Distortions and Economic Growth: Empirical Evidence. *Ful Emerging Markets Finance & Trade*, Vol. 45(3), 56-66.

Wasiuzzaman, S. & Tarmizi, H. B. A. (2010). Profitability of Islamic banks in Malaysia: an empirical analysis. *Journal of Islamic Economics, Banking and Finance*, *6*(4), 53-68.

Weon, H. J., Eui, H. W., & Sik, K. Y. (2010). The Study of Location Strategy for Bank through the Analysis of Inter-regional Financial Transaction Network. *International of u- and e- Service, Science and Technology*, 3(1), 21-30.

Wum, H. L., Chen, C. H., & Shiu, F. Y. (2007). The impact of financial development and bank characteristics on the operational performance of commercial banks in the Chinese transitional economy. *Journal of Economic Studies*, 34(5), p. 401-414.

Zaher, T. S. & Hassan, M. K. (2001). A Comparative Literature Survey of Islamic Finance Banking", *Financial Market Institutions and Instruments*, 10(4), 155-199.

Zantioti, L. E. (2009). *Does Islamic bank performance differ by region?* Unpublished Thesis (Master), Stockholm School of Economics.

Zeitun, R. & Tian, G. G. (2007). Capital Structure and Corporate Performance: evidence from Jordan. *Australasian Accounting Business and Finance Journal*, 1(4), 40-61.

Abdullah Awadh Bukair is a PhD Candidate in Accounting, College of Business, University Utara Malaysia (UUM). He holds a degree in accounting from University of Aden, Yemen in 1995, and a MA in International Accounting from UUM, Malaysia in 2008. His e-mail address: bukairaaa@yahoo.com.The areas of interest are Islamic accounting and financial and social Reporting.