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Financial Crisis and Determinants of Profitability in Islamic and Conventional Banks: The Study of Kuwait Banking Industry

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Abstract

This study is aimed at evaluating the impact bank specific and macroeconomic variables including the global financial crisis upon the performance of Islamic and conventional banks in Kuwait.The data are collected from nine banks operated in Kuwait over the period of 2005 to 2012 with four of them are Islamic banks and five are conventional banks. The ROA and ROE are used to measure profitability while the size, credit risk, bank diversification, efficiency, capital strength, and liquidity were used to measure bank specific variables. There are also three external variables that would be used to measure macroeconomic condition i.e. GDP growth, inflation, and financial crisis.The findings from pooled OLS have shown that credit risk, liquidity and efficiency significantly affecting profitability for both Islamic and conventional banks. For macroeconomic conditions, GDP is positively significantly affecting profitability of Islamic banking sector, while inflation is negatively affecting the profitability of conventional banking sector. The result also evidence that Islamic banking sector is more stable than the conventional banking sector in terms of their performance during and after the crisis period.

Keywords:

Financial crisis, profitability, Islamic bank, Kuwait

INTRODUCTION

The banking sector is considered as one of the most important financial institutions ensuring the capitalization of finance via saving to investment, thereby enabling to create a new financial value represented as economic growth in financial system. The presence of banking institutions with high profitability level has positive resemblance towards economic development. Hence, organizations of these banking institutions are crucial in achieving economic growth and development of any country and vice versa. Therefore, such institutions need to be highly regulated and protected from any shocks or crises given the volatile nature of banking business which expose it to challenges that may obstructs the individual bank to tolerate for long term sustainability and soundness of financial system. In this regards, Aburime(2009) explained that a productive and profitable commercial banking sector is proficient to bear the adverse financial distress and augments to provide sustainability in the economic system.

The aim of this study is to evaluate factors affecting the profitability of Islamic and conventional banking sector in Kuwait from 2005 to 2012. In addition, thisstudy exploresthe impact of the global financial crisis upon their profitability level.

LITERATURE REVIEW

Banking Sector in Kuwait

The first effort to build a bank in Kuwait was in 1935, with the cooperation between the Ottoman Bank and the British Bank of the Middle East to come up with a branch for their banks; nevertheless, it could not succeeded due to hesitant rulers party in Kuwait at that time(Al-Sharrah, 1999).The first permission to establish first branch in Kuwait was then approved in 1941. Afterward, numerous banks made efforts to enter the banking market in Kuwait. Yet again, authority monetary has prohibited foreign banks in conducting banking business within the country. Once the British bank's allowance of conducting business ended in 1971, the bank has changed its name into the Kuwait Bank for the Middle East with special amendment for Kuwaiti to purchase 60 percent of bank's capital. Until recent decade, Kuwait government are allowing some international banks with some restrictions such Citibank and HSBC.

Another successful establishment of banking industry in Kuwait was done by a group of Kuwaiti families established the

first National bank in Kuwait, branded today as the National Bank of Kuwait (NBK), which has been considered today as the largest commercial bank in the whole country. In actual fact, when Kuwait gained its independence in 1961, the founding of numerous other banks under control of Kuwaiti ownership was followed.

Furthermore, a number of specialised financial institutions were came forward such like Credit and saving bank which was found in 1965 backed by the government to channel surplus funds into National projects, agricultural and housing. In addition, Industrial Bank of Kuwaitwas founded in 1973, with aspire to fill the gap in medium- and long-term industrial financing. The private Real Estate Bank was established in 1973 as main financial provider of property development within the country (Al-Muharrami, 2008).

Conventional Banking Profitability Performance

Among early literature in banking profitability performance is Bourke (1989) that studied banks' profitability performance of twelve countries located in North America and Australia. The objective was to examine the internal and external determinants of profitability in different countries using secondary data retrieved from financial statements of 90 banks between 1972 and 1982. In his approach, Bourke divided his data into internal and external determinants; the independent variables used in his study were staff expenses, liquidity ratio, capital ratio, market growth, bank concentration, inflation and interest rate and government ownership. His dependent variables were ROAand ROE. The major findings of his study were capital ratio; liquidity ratio and interest rate are positively related to profitability. His rationale for positive sign of capital ratio was that well capitalised banks enjoyed cheaper source of funds, because of lower risk which will increase profitability.

Demirgüç-Kunt and Huizinga (1999) used a fixed effect regression analysis to analyze the influence of bank characteristics and macroeconomic condition upon the functioning of banks, as reflected in the net interest margins (NIM) and bank profitability (ROA). Additionally, the paper used other special variables i.e. taxation variables, the deposit insurance index, financial structure variables, and legal and institutional indicators. The data consist of cross-country data set with bank-level data of 80 countries from year 1988 to 1995 and theoutput highlighted the

positive relationship between capitalization and profitability, as well as a negative relationship between reserves and profitability. Furthermore, larger bank asset to GDP ratio and a lower market concentration ratio lead to lower margins and profits. Foreign ownership have positive significant effect on interest margins and bank profitability. Lastly, the paper also highlighted that reserves also have a major impact on margins and profitability in developing countries than in developed countries.

Kosmidou et al., (2006)studied the profitability of UK commercial banks with sample consisted of unbalanced panel data for 32 commercial banks within the period 1995 to 2002. The study found that efficiency and bank size have a negative effect on profitability; liquidity is negatively correlated to net interest income but positively correlated with profitability, while capital strength shown positive relationship with profitability. However, credit risk has a positive impact upon profitability justified by higher risk leading to higher margin. The paper also highlighted that macroeconomic environment such as gross domestic product and inflation have a positive impact upon performance.

In Greek, Athanasoglou et al., (2008) examined the impact of bank specific, industry specific and macroeconomic determinants of the country towards the banks' profitability, which covers the period of 1985 to 2001. The study used ROA and ROE as two alternative measures for profitability and found that credit risk and operating expenses to have negative correlation with profitability. However, production growth showed positive relationship and size was noted to have no effect on profitability. For the macroeconomic determinants, inflation and cyclical output were to have a significant relationship to profitability.

Goaied and Bennaceur (2008)scrutinized the impact of the banks' characteristic, financial structure and macroeconomic indicators on banks' net interest margins and profitability in the Tunisian banking industry between 1980 to 2000 periods. The study found that a relationship existed between high net interest margin with profitability and high capital with large overhead. Moreover, the study also confirmed the positive role of Tunisian stock market development upon bank profitability. Lastly, the paper suggested the need to boost the development of equity market in order to improve banks' profitability as banks and stock market were found to be complementary.

Hoffmann (2011) examined the profitability determinants

of the U.S banking industry by assessing the bank specific determinants and macroeconomics determinants by using GMM method. The significant finding of the study indicates the negative relationship between capital ratio and profitability. The increase in capital leads to a decrease in the bank's profitability, because the higher the capital ratio the lower the risk on equity which will decrease the return in equity.

Ahmed and Khababa (1999) used the regression model with three alternative measures which was used on the two groups. The first group is classified as dependent variables which consist of return on asset (ROA), return on equity (ROE), and Earnings per share. The second group is classified as independent variables which consist of business risk, concentration, and market size. The results indicated that both bank size and the business risk were the main variables that determined profitability performance.

Islamic Banking Profitability Performance

Haron (1996) studied the effects of external factors on the profitability of Islamic banks by dividing the Islamic banks into two group based on where their market operates in; Islamic banks operating in monopolistic market and Islamic banks operating in competitive market. The paper examined profitability variables of Islamic banks using ordinary least square method against external determinants; competition, regulation, concentration, market share, ownership, scarcity of capital, money supply, inflation, economy of scale and banks size. The findings highlighted that interest rate; inflation and size have significant and positive impact upon the profitability Islamic banks. Another significant finding is that money supply has negative relationship with profitability of the Islamic banks. In addition, Islamic banks operated in competitive market are better managed than Islamic banks in monopolistic market.

Bashir (1998) examined the determinants of Islamic bank's performance of eight Middle Eastern countries from 1993 to 1998. Using regression analysis to determine the underlying determinants of Islamic bank performance, Bashir (1998) found that the Islamic bank's profitability measures respond positively to the increase in capital and loan ratios. He concluded that foreign owned banks are more profitable than their domestic counterparts.

In Malaysia, Abduh and Idrees(2013) investigated the

impact of bank characteristics and overall financial environmental factors upon Islamic banks between 2006 and 2010. The paper used pooled regression analysis on variety of internal and external bank characteristics. The result shows that the bank size is a vital importance in affecting its profitability. In addition, financial market development and market concentration has a significant positive impact in determining profitability. From the macro-economic variables, inflation has a significant positive impact on Islamic banks 'profitability which shows the different nature between Islamic and conventional banks. In addition, Abduh et.al. (2011) evidenced that financial crisis gave a short run positive and significant impact towards Islamic banking performance.

Samad (2004) compared the performance of Bahrain's Islamic and conventional banks for the period from 1991 to 2001, post the first Gulf war. The sample included 6 Islamic banks and 15 conventional banks. Variables used are 9 financial ratios to inspect the profitability, liquidity risk and credit risk of the banks. By applying student t-test, the paper found that performance of the Islamic and conventional banks in terms of profitability and liquidity are almost similar. Indicating that Islamic banks perform as good as their conventional counterparts, though they are relatively new in the financial market. Nevertheless, the study also found that the credit risk of Islamic banks is far below that of conventional banks.

Despite many existing literatures and published researches measuring the performance of banking industry, only few literatures discuss the profitability and performance of Islamic banks,more specifically for the gulf countries. This study is aimed mainly at filling the gap in literatures by providing empirical evidence on the profitability determinants of Islamic banking as well as conventional banking, especially in the case of Kuwait banking sector during the period of 2005-2012.

RESEARCH METHOD

The collected data consists of four domestic Islamic banks and fives domestic conventional banks observed over the period of 2005 to 2012. These banks are considered core business components in Kuwait banking industry. Each bank shall be met the following two conditions in order to be included as sample. Firstly, it should be a commercial bank and secondly, it should produces balance sheet and income statement for at least

within the period of the study,between 2005 and 2012, in which, it has been targeted to be collected from the Bankscope Database (see Table 1). Furthermore, the data for external variables was retrieved from the International Monetary Fund and World Bank websites.

Table 1. Selected Kuwaiti Banks in the Study

Domestic Commercial Conventional Banks	*Domestic Commercial Islamic Banks*
1. Commercial Bank of Kuwait SAK	1. Kuwait International Bank
2. Al Ahli Bank of Kuwait (KSC)	2. Boubyan Bank KSC
3. Gulf Bank KSC	3. Kuwait Finance House
4. National Bank of Kuwait S.A.K.	4. Ahli United Bank KSC
5. Burgan Bank SAK	

The Dependent Variables

There are two dependent variables used in this research i.e. Return to Asset (ROA) and Return to Equity (ROE). These two dependent variables have been used as profitability indicators in many previews performance literatures such as Bashir (1998), Ahmed and Khababa (1999) and Goaied and Bennaceur (2008).

ROA depicts the profit of the year as percentage of the total assets. It has been measured the profitability of the bank and efficiency of its management in deploying the assets to maximize the return. ROA was treated as measure of financial performance in this research. High value of ROA reflects the bank's profitability and the management's ability to generate profit after deducting all the expenses and taxes, from the bank's assets.

ROE is the ratio of a bank's net after-Tax income divided by its total equity capital. It represents the profit of the year as percentage of shareholder's equity. ROE indicates the degree of the bank's profitability and shows the management's efficiency in utilizing the bank's equity in the best manner. The higher the value ROE the more profitable the bank and the more efficient its management.

The Independent Variables

The independent variables used in this study were divided into two categories i.e. internal variables and external variables. The internal variables will be discussed in the first seven of the variables and the external variables will be discussed in the last three.

Bank Size

The effect of a growing size on profitability has been proven to be positive by many researchers such as Bikker and Hu (2002) and Goddard et al., (2004). However, Eichengreen and Gibson (2001) suggested that there was certain limit to the positive relation between size and the profitability. If the bank became extremely large, it will adopt a negative relationship with the profitability because of bureaucratic and other reasons. The size is represented by the natural log of the total asset.

Credit Risk

Loan loss provisions per total loan is used as a proxy for credit risk which has been considered as one of the most important criteria to assess the quality of loans or asset of a commercial bank. The relationship proposed is that an increase of high risk loan in the financial institutions will raise the risk of non-performing loans which eventually decrease profit and vice versa (Miller and Noulas, 1997).

Bank Diversification

Bank diversification deals with the income that bank generates through nontraditional channels, such as investing in stock markets, derivatives as well as other non-interest income which came from commissions and service charges. It is measured by dividing the non-interest operating income by the total asset. Canal (1994) found that there was a positive relationship between bank diversification and profitability.

Efficient Management

It is represented by the ratio of non-interest operating expense divided by total asset. It shows how efficient the management in maximizing the shareholders' wealth by managing the operating costs of running the bank, including staff salaries and benefits, occupancy operating expenses and other expenses such as office supplies. Bourke (1989) and Kosmidou (2008) found that poor management efficiency leads to lower profitability.

Bank Capital

The capital strength is measured by dividing the total

equity by the total assets. It is to find the sufficiency level of the amount of equity to absorb any shocks that the bank might experience. Althanasoglou et al., (2008), Kosmidou (2008), and Berger (1995) found that bank capital positively correlated with the profitability. Nevertheless, Hoffmann (2011) found that higher capital ratio would lower the risk on equity which would decrease the return on equity. This may be caused by the attitude of the bank of being over cautious and ignoring profitable opportunities. Therefore, the relationship between Bank capital and the profitability is unclear.

Efficiency

It is also called the operating expense ratio (OER) which is measured by dividing operating expense of the bank with the gross income. The management of the bank are required most of the time to maintain or reduce the OER. It is expected that the profit level of the bank will be improved by reducing of the OER of the bank such as utilities, insurance, taxes and maintenance. Therefore, it is clear that the lower OER the higher the profits or margins of bank.

Liquidity

It is measured by dividing total loan with total assets of the bank. The higher value of the ratio shows the lower liquidity level of the bank. In order to avoid insolvency problems, banks often hold liquid assets, like any asset that can be converted immediately to cash with little or no loss in value such as inter-bank placement, Treasury bill and readily market security. Therefore, it would be reasonable to expect higher liquidity to be associated with higher bank profitability because of increase in Interest income according.

GDP Growth

The annual GDP growth in percentage is used as the first external factors in this study. Following previous studies, it is expected that GDP growth to have a positive impact on the banks' profitability performance (Goaied and Bennaceur, 2008).

Inflation

In banking performance literature, inflation normally used by numerous researchers as one of the variables that assessing the impact of macroeconomic conditions. The sign of the coefficient is not clear or ambiguous, as it can either be positive or negative coefficient. Hence, Perry (1992) argued that the changes can be explained based on the level of inflation anticipation by the bank itself.

Financial Crisis

In order to assess the impact of the global financial crisis towards Kuwait banking sector, it is very important to divide the samples into three different periods in order to ensure the accuracy level. The first period would be first tranquil period (DUM-PRE-CRISIS) covering period of 2005 to 2007. The second period is during global financial crisis (DUMCRISIS) covering 2008 and 2009, the last period is the second tranquil (DUM-POST-CRISIS), covering year 2010 and 2012.

Pooled OLS

Pooled ordinary least square (OLS) panel data regression is employed in this study. It is used to examine the relationship between dependent variable and independent variables for data with many individuals and many years of observations. Some previous similar studies using this methods are Ahmed and Khababa (1999), Demirgüç-Kuntand Huizinga (1999), Athanasoglou et al., (2008), and Hoffmann (2011).
The tested models in this study are as follow,

$$ROA_{j,i}=\beta_0+\beta_1 \sum \text{Bank characteristics}_{j,t} +\beta_2 \sum \text{Macroeconomic conditions}_t +\beta_3 \sum \text{Dummy Variables}+\varepsilon_{j,t}$$

The following equations are derived from the above equation with more details:
Model 1

$$ROA_{j,i}=\beta_0+\beta_1 LNTA_{ji}+\beta_2 LLP/TL_{ji} +\beta_3 NII/TA_{ji}+\beta_4 NIE/TA_{ji}+\beta_5 TE/TA_{ji} +\beta_6 LNTA_{ji}+\beta_7 Loan/TA_{ji}$$

Model 2

$$ROA_{j,i}=\beta_0+\beta_1 LNTA_{ji}+\beta_2 LLP/TL_{ji}+\beta_3 NII/TA_{ji}+\beta_4 NIE/TA_{ji}+\beta_5 TE/TA_{ji} +\beta_6 LNTA_{ji}+\beta_7 Loan/TA_{ji}+\beta_8 GDP_i+\beta_9 INF_i$$

Model 3

$$ROA_{j,i}=\beta_0+\beta_1 LNTA_{ji}+\beta_2 LLP/TL_{ji}+\beta_3 NII/TA_{ji}+\beta_4 NIE/TA_{ji}+\beta_5 TE/TA_{ji}+\beta_6 LNTA_{ji}+\beta_7 Loan/TA_{ji}+\beta_8 GDP_i+\beta_9\ INF_i+\beta_{10} Dum\ pre\ crisis_{ji}$$

Model 4

$$ROA_{j,i}=\beta_0+\beta_1 LNTA_{ji}+\beta_2 LLP/TL_{ji}+\beta_3 NII/TA_{ji}+\beta_4 NIE/TA_{ji}+\beta_5 TE/TA_{ji}+\beta_6 LNTA_{ji}+\beta_7 Loan/TA_{ji}+\beta_8 GDP_i+\beta_9\ INF_i+\beta_{10} Dum\ crisis_{ji}$$

Model 5

$$ROA_{j,i}=\beta_0+\beta_1 LNTA_{ji}+\beta_2 LLP/TL_{ji}+\beta_3 NII/TA_{ji}+\beta_4 NIE/TA_{ji}+\beta_5 TE/TA_{ji}+\beta_6 LNTA_{ji}+\beta_7 Loan/TA_{ji}+\beta_8 GDP_i+\beta_9 INF_i+\beta_{10} Dum\ post\ crisis_{ji}$$

In addition to those five models above, following models using ROE as dependent variable are also tested,

Model 6

$$ROE_{j,i}=\beta_0+\beta_1 LNTA_{ji}+\beta_2 LLP/TL_{ji}+\beta_3 NII/TA_{ji}+\beta_4 NIE/TA_{ji}+\beta_5 TE/TA_{ji}+\beta_6 LNTA_{ji}+\beta_7 Loan/TA_{ji}$$

Model 7

$$ROE_{j,i}=\beta_0+\beta_1 LNTA_{ji}+\beta_2 LLP/TL_{ji}+\beta_3 NII/TA_{ji}+\beta_4 NIE/TA_{ji}+\beta_5 TE/TA_{ji}+\beta_6 LNTA_{ji}+\beta_7 Loan/TA_{ji}+\beta_8 GDP_i+\beta_9\ INF_i$$

Model 8

$$ROE_{j,i}=\beta_0+\beta_1 LNTA_{ji}+\beta_2 LLP/TL_{ji}+\beta_3 NII/TA_{ji}+\beta_4 NIE/TA_{ji}+\beta_5 TE/TA_{ji}+\beta_6 LNTA_{ji}+\beta_7 Loan/TA_{ji}+\beta_8 GDP_i+\beta_9 INF_i+\beta_{10} Dum\ pre\ crisis$$

Model 9

$$ROE_{j,i}=\beta_0+\beta_1 LNTA_{ji}+\beta_2 LLP/TL_{ji}+\beta_3 NII/TA_{ji}+\beta_4 NIE/TA_{ji}+\beta_5 TE/TA_{ji}+\beta_6 LNTA_{ji}+\beta_7 Loan/TA_{ji}+\beta_8\ GDP_i+\beta_9\ INF_i+\beta_{10}\ Dum\ crisis$$

Model 10

$$ROE_{j,i}=\beta_0+\beta_1 LNTA_{ji}+\beta_2 LLP/TL_{ji}+\beta_3 NII/TA_{ji}+\beta_4 NIE/TA_{ji}+\beta_5 TE/TA_{ji}+\beta_6 LNTA_{ji}+\beta_7 Loan/TA_{ji}+\beta_8\ GDP_i+\beta_9 INF_i+\beta_{10}\ Dum\ post\ crisis$$

Where, $ROA_{j,t}$ is Return on average asset of the j the bank in period t derived, where also $ROE_{j,I}$ is Return on average equity of the j the bank in period t derivedwhich were considered both as indicator of dependant variables for this model, the rest of variables were been considered independent according to this model, $TL/TA_{j,t}$ is the total loan divided by total asset, $LNTA_{j,t}$ is a natural logarithm of total assets of bank j in period t; LLP/

$TL_{j,t}$ is total loan loss provisions divided by total loan of bank j in period t; $NII/TA_{j,t}$ is the total non-interest income divided by total asset,$NIE/TA_{j,t}$ is total non-interest expenses divided by total assets of bank j in period t; $TE/TA_{j,t}$ is total shareholders' equity divided by total asset of bank j in period t; $OER_{j,t}$ is total Operating Expenses divided by the Gross Income j in period t; GDP_i is annual growth of gross domestic product (GDP);$INFL_i$ is the rate of inflation; DUM-PRE-CRISIS $_{j,t}$ is a dummy variable for controlling the effect of period before crisis; DUM-CRISIS $_{j,t}$ is the dummy variable for controlling the effect of period of crisis; DUM-POST-CRISIS $_{j,t}$ is the dummy variable for seeing effect of period after crisis. This variable indicates $_j$ the bank in period t where (equal to 1 if it is before crisis, during crisis and post crisis respectively, 0 otherwise). Table 2 below is summarizing the variables used in this study and the hypotheses.

Table 2. Selected variables included in the study

Variables	Description	Hypothesis Relationship With Profitability
Dependent Variables		
ROA	**Return on Asset**	**N/A**
ROE	**Return on Equity**	**N/A**
Independent Variables		
Internal Factors		
NlogTA	The Natural Logarithm of the accounting value of Total Asset	Positive
TL/TA	Ratio of Total Loans/ Total Asset	Positive
NII/TA	Ratio of Non-Interest Income/Total Asset	Positive
LLP/TL	Ratio of Overhead Expenses/ Total Asset	Negative
OER	Ratio of total Operating Expenses divided by the Gross Income	Negative
NIE/TA	Ratio of Non-interest Expenses/Total Asset	Negative
TE/TA	Ratio of Total Equity/ Total Asset	Positive

External Factors		
GDP	The Annual growth of Gross Domestic product	Positive
INF	Annual Inflation Rate (CPI)	Ambiguous
DUM-PRE-CRISIS (Period Before Crisis)	Dummy variable that take the value of 1 for first Tranquil period pre-crisis and 0 otherwise	Positive
DUM-CRISIS (Period during Crisis)	Dummy variable value 1 for first crisis period 0 otherwise	Positive
DUM-POST-CRISIS (Period After-crisis)	Dummy variable that take the value of 1 for first Tranquil period post-crisis and 0 otherwise	Negative

FINDINGS AND DISCUSSION

Descriptive Statistic

Table 3summarises the descriptive statistics for 7 ratios of the 5 Conventional banks with 40 observations and 4 Islamic banks with 32 observations from the year of 2005 to 2012. Ratios are illustrated by its means, minimum, maximum and standard deviation values.

Table 3. Descriptive statistics for all tested variables

C= 40 obs	*Mean*		*Minimum*		*Maximum*		*Standard deviation*	
I= 32 obs	*C*	*I*	*C*	*I*	*C*	*I*	*C*	*I*
ROA	1.637	1.317	-7.168	-5.761	3.896	4.307	1.851	1.707
ROE	10.833	8.312	-135.994	-45.896	30.145	27.003	25.745	12.390
Nlog TA	8.400	7.650	7.544	5.795	9.707	9.596	0.547	1.027
LLP/TL	1.044	1.507	0.011	-0.558	6.745	11.486	1.220	2.032
NII/TA	1.223	1.272	-0.750	-1.451	1.906	3.267	0.444	1.072
NIE/TA	1.029	1.827	0.714	1.124	1.574	4.531	0.205	0.648
TE/TA	12.393	15.433	0.768	9.235	17.380	32.542	3.134	4.564
OER	27.565	44.900	16.783	29.075	51.504	94.690	7.215	13.133
TL/TA	59.500	55.838	41.499	4.505	70.108	69.057	7.686	14.701

Note: The table presents the summary statistics of the variables used in the regression analysis, "C" stands for Conventional banks and "I" stands for Islamic Banks; "obs" stands for number of observations. The variables. The variables used are "ROA" and "ROE" reflect profitability, "NLogTA" reflects Size, "LLP/TA" reflects on Credit Risk, "TL/TA" Liquidity, "NII/TA" reflects on bank diversification, "OER" reflects on operating efficiency, "TE/TA" reflects on capital strength.

Table 3 shows the average of ROA for conventional banks estimated at 1.63% with a minimum of -7.16 % and a maximum of 3.89 %. In contrast, the mean of Islamic banks approximated at 1.31% with a negative minimum of -5.76 % and a maximum of 4.30%. The descriptive statistics point out that conventional banks in Kuwait banking sectors are outperforming the Islamic banks in terms of utilizing their assets. In addition, the mean of ROE for conventional banks is 10.83% with a minimum of -135.99% and a maximum of 30.14%. On other hand, Islamic banks score mean is 8.31%, with -45.89% recorded as minimum and maximum of 27%. This shows that conventional banks are more effective in utilizing shareholders investments compared to Islamic banks.

In terms of liquidity, conventional banks have an average 59.5% with a minimum of 41.49% and a maximum of 70.1%. On the other hand, Islamic banks show a different figure that is 55.83%, with a minimum of 4.5 % and maximum of 69.1%. This indicates that most of the time Islamic banks are more solvent and faster in meeting their debt compared to the conventional banks. However, conventional banks show a better liquidity management with 7.68% standard deviation with comparison to Islamic banks which recorded 14.7% standard deviation. It gives Islamic banks a high liquidity risk exposure. Therefore, all these records are consistent and lead to the fact that conventional banks are still the first runner in the industry with much more experiences than Islamic banks.

Furthermore, when it comes to credit risk, Islamic banks showed higher mean estimated at 1.5% against 1.04% for conventional banks. Therefore, it can be assumed that conventional banks absorb lower provision and have lower default risk compared to Islamic banks. In addition, Islamic banks indicated higher mean of operating efficiency ratio of 44.9% compared to conventional banks with mean of 27.56 %. Similarly, Islamic banks have higher percentage in terms of capital strength which is 15.43% while conventional is 12.39%.

Pooled OLS

This study has produced four panel data regressions separately to see the effects of these determinants on profitability for both Islamic banking as well as conventional banking sectors. These four regressions are further been divided into two categories, first one consists of two regressions for Islamic banking sector data which is based on ROA and ROE. The second consists of two regressions for conventional banking sector data.

Table 4. Panel OLS regression result for Profitability of conventional banking (ROA)

	OLS				
	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	4.802***	4.358***	1.992	4.351***	2.693*
	(1.496)	(1.521)	(1.796)	(1.562)	(1.606)
Bank Characteristics					
NLog TA	0.113	0.177	0.261**	0.178	0.208*
	(0.124)	(0.117)	(0.117)	(0.124)	(0.111)
LLP/TL	-0.638***	-0.624***	-0.625***	-0.625***	-0.584***
	(0.048)	(0.047)	(0.045)	(0.054)	(0.048)
NII/TA	-0.007	-0.016	0.308	-0.013	0.208
	(0.325)	(0.308)	(0.326)	(0.321)	(0.306)
NIE/TA	2.427***	2.421***	1.512*	2.409***	2.099***
	(0.734)	(0.684)	(0.767)	(0.788)	(0.657)
TE/TA (EQASS)	-0.015	-0.028	0.009	-0.028	0.016
	(0.031)	(0.030)	(0.033)	(0.031)	(0.035)
OER	-0.142***	-0.141***	-0.103***	-0.141***	-0.116***
	(0.028)	(0.026)	(0.030)	(0.028)	(0.027)
TL/TA	-0.024**	-0.020**	-0.012	-0.020**	-0.010
	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)
Macro-Economic Conditions					
GDP		0.020	0.007	0.020	0.002
		(0.012)	(0.013)	(0.012)	(0.014)
INF		-0.049*	-0.024	-0.048	-0.088***
		(0.028)	(0.029)	(0.047)	(0.032)

Dummy Variables					
DUMMY (Before crisis)			0.454** (0.208)		
DUMMY (Crisis)				-0.009 (0.277)	
DUMMY(After crisis)					-0.486** (0.215)
R2	0.967	0.973	0.977	0.973	0.977
Adjusted R2	0.959	0.965	0.969	0.964	0.969
Durbin-Watson stat	1.332	1.454	1.860	1.454	1.834
F-statistic	132.163***	119.521***	121.579***	103.987***	122.739***
No. of Observations	40	40	40	40	40

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

Table 4 shows that liquidity risk, LOAN/TA, reveals a positive relationship for model 1, 2, and 4 and they are statistically significant at 5%. The result implies that more profitable banks invested in chunks of liquid investment, hence the profitability is lower. Therefore, more profitable banks tend to place their investments in liquid assets and they have enough liquidity to meet their day to day customer obligations.

The presence of non-performing loans as one of the profitability driving factors for banking has become a common phenomenon. Miller andNoulas (1997) suggested that higher the risk of loan portfolio of banks, greater would be the chance of default on loan and thus profitability would be lower. Interestingly, Table 4 also unveils banks' overhead cost (NIE/TA) to be positively influencing profitability with 1% significance level. Despite its awkwardness, similar facts werealso propounded by Kosmidou (2008). Operating expenses (OER) is negatively influencing profitability with 1% significance level which imply that the increase in expenses would reduce the banking profitability and vice versa.

For the macroeconomic conditions, it can be seen in Table 4 that GDPdoes not have any significant impact while inflation

does have a negative impact at 10% significance in model 2 and 1% level in model 5.To examine the crisis, it can be seen that only before crisis dummy and after crisis dummy are statistically significant at 5 %, with positive sign period before crisis and negative sign after crisis period. This shows that crisis does give a significant impact towards the ROA performance of the Kuwaiti conventional banks.

Table 5. Panel OLS regression result for Profitability of conventional banking (ROE)

	OLS				
	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	14.565	36.909	86.946**	33.739	82.484***
	(29.222)	(30.529)	(35.728)	(31.064)	(29.716)
Bank Characteristics					
LNTA	-1.070	-0.695	-2.478	-0.201	-1.545
	(2.413)	(2.358)	(2.332)	(2.469)	(2.055)
LLP/TL	-7.786***	-8.291***	-8.269***	-8.636***	-9.392***
	(0.942)	(0.950)	(0.887)	(1.066)	(0.885)
NII/TA	11.916*	9.303	2.460	10.329	3.193
	(6.343)	(6.187)	(6.485)	(6.388)	(5.653)
NIE/TA	33.002**	31.320**	50.543***	25.887*	40.124***
	(14.339)	(13.735)	(15.263)	(15.682)	(12.163)
TE/TA (EQASS)	0.196	-0.225	-1.006	-0.263	-1.431**
	(0.606)	(0.611)	(0.662)	(0.617)	(0.640)
OER	-1.523***	-1.590***	-2.410***	-1.459**	-2.296***
	(0.551)	(0.528)	(0.607)	(0.561)	(0.503)
Loan/TA	0.157	0.060	-0.112	0.042	-0.236
	(0.177)	(0.180)	(0.184)	(0.183)	(0.179)
Macro-Economic Conditions					
GDP		-0.286	-0.001	-0.260	0.193
		(0.243)	(0.258)	(0.248)	(0.255)
INF		-1.168**	-1.694***	-0.617	-0.089
		(0.563)	(0.572)	(0.939)	(0.584)
Dummy Variables					
DUMMY (Before crisis)			9.610**		
			(4.135)		
DUMMY (Crisis)				-4.059	
				(5.508)	

DUMMY(After crisis)					-13.302*** (3.985)
R2	0.934	0.943	0.952	0.945	0.959
Adjusted R2	0.920	0.927	0.936	0.925	0.945
Durbin-Watson stat	2.000	2.040	2.386	2.020	2.343
F-statistic	64.778***	55.648***	57.968***	49.374***	68.124***
No. of Observa-tions	40	40	40	40	40

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

Table 5 shows five models pertaining Kuwait conventional banking profitability mainly based on ROE as dependent variable. The result shows that credit risk (LLP/TL) has a strong negative influence with 1% significance level in all five models, which explains the inverse relationship between non-performing loans and profitability (ROE) in Kuwait conventional banking sector. The negative relationship between credit risk and profitability is consistent with Miller and Noulas (1997), who mentioned higher exposure of credit risk lead to greater non-performing loans which is diminishing profitability. The negative relationship was also found between the operating expenses (OER) and the profitability. This in line with preview assumption, that operating expenses has inverse relationship with profitability. In addition, management efficiency (NII/TA) and profitability has shown a positive relationship, which is supported by Canal (1994).

As for macro-economic variables, the result shows a negative relationship between profitability and inflation with significance level of 5% for model 2 and 1% for model 3. On the other hand, there is unclear sign among models for GDP coefficient with no statistically significance.In terms of dummy variables, Table 5 discloses that the coefficient for dummy before crisis is positive with significance level of 5%. Interestingly, the coefficient for dummy during the crisis and after the crisis show a positive sign with significance level of 1% for the dummy after crisis which also confirm the bad impact of the global financial crisis upon the ROE performance of Kuwait conventional banks.

Table 6. Panel OLS regression result for Profitability of Islamic banking (ROA)

	OLS				
	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	0.208	-0.215	-0.372	-0.113	-0.933
	(2.039)	(1.955)	(2.202)	(1.923)	(1.974)
Bank Characteristics					
LNTA	0.501**	0.507**	0.527**	0.499**	0.684***
	(0.225)	(0.214)	(0.250)	(0.210)	(0.242)
LLP/TL	-0.631***	-0.585***	-0.588***	-0.535***	-0.562***
	(0.083)	(0.082)	(0.086)	(0.089)	(0.081)
NII/TA	-0.150	-0.162	-0.189	-0.159	-0.405
	(0.303)	(0.281)	(0.330)	(0.276)	(0.322)
NIE/TA	0.352	0.308	0.327	0.277	0.451
	(0.357)	(0.340)	(0.366)	(0.335)	(0.347)
TE/TA (EQASS)	0.253***	0.226***	0.227***	0.221***	0.228***
	(0.044)	(0.043)	(0.044)	(0.042)	(0.042)
OER	-0.097***	-0.090***	-0.091***	-0.089***	-0.097***
	(0.020)	(0.020)	(0.021)	(0.019)	(0.020)
Loan/TA	-0.031**	-0.027**	-0.027**	-0.022*	-0.022*
	(0.012)	(0.012)	(0.013)	(0.013)	(0.013)
Macro-Economic Conditions					
GDP		0.056**	0.054***	0.052**	0.038
		(0.023)	(0.025)	(0.023)	(0.026)
INF		0.007	0.011	-0.082	-0.042
		(0.051)	(0.058)	(0.084)	(0.060)
Dummy Variables					
DUMMY (Before crisis)			0.065		
			(0.378)		
DUMMY (Crisis)				0.574	
				(0.431)	
DUM-MY(After crisis)					-0.571
					(0.397)

R2	0.905	0.926	0.926	0.932	0.932
Adjusted R2	0.878	0.895	0.891	0.899	0.900
Durbin-Watson stat	2.147	2.379	2.359	2.550	2.256
F-statistic	32.736***	30.475***	26.220***	28.570***	28.968***
No. of Observations	32	32	32	32	32

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

Table 6 provides the models tested for Islamic banking industry in Kuwait.It can be observed from Table 6 that the coefficient for variable Size (LNTA) in model 1 to model 4 are positive with significance level of 5%, while in model 5 is 1%. This finding is supported by Bikker and Hu (2002). Therefore, it is confirming the theory that the larger the size, the more the benefits of economic of scale and to generate profit more than those banks with small size.

As predicted, credit risk (LLP/TL) is showing a negative relationship with profitabilitywith significance level of 1%.Moreover, capital strength (TE/TA) has displayed a strong positive relationship with profitabilitywith significance level of 1% in all five models. This shows that well capitalized banks would definitely face lower possibility of having bankruptcy, and thus would result in a higher profitability.

In addition, liquidity risk (Loan/TA) and operating expenses (OER) has displayed a negative relationship with profitability with significance level of 1% for all models. The finding shows that poor liquidity management as well as mismanagement in operating expenses contributes to lower profitability level of Islamic banking.

As for macroeconomic conditions, it can be seen that only GDP has a positive and significant relationship with the performance of Kuwait Islamic banking industry during the tested period. Inflation (INF) level does not show a clear sign as for the first two models with positive sign while negative sign for last two models with overall no statistically significance. Interestingly, for the dummy variables representing financial crises, it can be shown through Table 6 that there are no statistically significances upon the Islamic banking sector.

Table 7. Panel OLS regression result for Profitability of Islamic banking (ROE)

	OLS				
	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	4.584	3.217	3.351	3.653	0.660
	(15.533)	(14.587)	(16.437)	(14.752)	(15.274)
Bank Characteristics					
LNTA	3.622**	3.459**	3.442*	3.429**	4.089**
	(1.711)	(1.593)	(1.868)	(1.610)	(1.874)
LLP/TL	-4.261***	-3.807***	-3.804***	-3.593***	-3.726***
	(0.636)	(0.610)	(0.639)	(0.681)	(0.630)
NII/TA	-1.326	-1.337	-1.313	-1.323	-2.201
	(2.308)	(2.095)	(2.464)	(2.117)	(2.492)
NIE/TA	2.455	2.424	2.407	2.295	2.935
	(2.722)	(2.537)	(2.736)	(2.570)	(2.684)
TE/TA (EQASS)	1.485***	1.257***	1.256***	1.235***	1.262***
	(0.337)	(0.317)	(0.326)	(0.322)	(0.321)
OER	-0.794***	-0.753***	-0.752***	-0.747***	-0.779***
	(0.156)	(0.147)	(0.157)	(0.149)	(0.154)
Loan/TA	-0.136	-0.085	-0.085	-0.064	-0.067
	(0.095)	(0.092)	(0.094)	(0.097)	(0.097)
Macro-Economic Conditions					
GDP		0.427**	0.428**	0.411**	0.365*
		(0.173)	(0.189)	(0.176)	(0.199)
INF		-0.154	-0.157	-0.534	-0.328
		(0.380)	(0.436)	(0.642)	(0.467)
Dummy Variables					
DUMMY (Before crisis)			-0.055		
			(2.821)		
DUMMY (Crisis)				2.444	
				(3.307)	
DUM-MY(After crisis)					-2.031
					(3.071)

R2	0.896	0.922	0.922	0.924	0.923
Adjusted R2	0.865	0.889	0.884	0.887	0.887
Durbin-Watson stat	2.170	2.630	2.633	2.690	2.563
F-statistic	29.411***	28.726***	24.679***	25.375***	25.236***
No. of Observations	32	32	32	32	32

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

Table 7 provides the finding that is based on ROE as the dependent variable for Kuwait Islamic banking sectors. Similar to previous findingsin Table 6, the variable Size (LNTA) has shown a positive relationship with ROE as profitability which is supported by Kosmidou (2008). In addition, the negative and significant relationship between credit risk (LLP/TL) and profitability is also supported by Miller and Noulas (1997).

With reference to capital strength (TE/TA), it can be seen that there is a positive and significant impact upon profitability (ROE) of Kuwait Islamic banking sector, at 1% significance level. This finding is supported by Goddard et al. (2004). In addition, the variable of operating expenses (OER) is shown a significant and negative impact towards the ROE of Kuwait Islamic banking sector for all models. Onthe other hand, liquidity (Loan/TA) and management efficiency (NIE/TA) has no significant impact towards profitability (ROE) of Kuwait Islamic banking sector in all models during the tested period.

Pertaining to macroeconomic variables, the GDPhas shown a significant and positive impact upon the profitability (ROE). Meanwhile for the dummy variables of financial crises, it can be seen from Table 7 that for the time range tested in this study, all three dummy variables for financial crises are not significant.

CONCLUSION

With regard to Kuwait conventional banking sector, this study found that there is a significant and negative impact of credit risk upon profitability level of conventional banking sector. Another significant finding is that operating expenses efficiency is negatively influencing the profitability of Kuwait conventional banking. In addition, efficient management has displayed a significant positive relationship with profitability of Kuwait conventional banking sectors. As for the macroeconomic

conditions, the inflation has shown a significant and negative impact towards profitability of Kuwait conventional banking sector. Interestingly, the dummy variable of after crisis period has shown a negative impact upon profitability. With reference to the dummy variable of before crisis, it has a positive and significant impact upon profitability of Kuwait conventional banking sector.

Similarly, credit risk and liquidity risk had also shown a significant and negative impact upon profitability of Kuwait Islamic banking sector. Moreover, there is a positive and significant relationship between size and profitability as well as capitalization and profitability of Kuwait Islamic banking sector. However, indicator of operating efficiency has shown a significant and negative relationship with the profitability.

As one of the most important macroeconomic statistics, GDPhas confirmed a significant and positive relationship with the profitability of Kuwait Islamic banking sector. However, there is no significant relationship between inflation and profitability of Kuwait Islamic banking sector which has been considered as something good. This could be due to a strong connection between Islamic financial institutions and the real sector of the economy. Interestingly, there is no significant relationship between all dummy variables of financial crises and the profitability of Kuwait Islamic banking sector which concludes that Islamic banking sector in Kuwait had performed better in terms of their resilience towards the global financial crises.

There are at least two limitations that can be identified from this study. Firstly is the sample size which is considered small, and secondly is the method of analysis. Therefore, this study recommends of adding the study period in order to enlarge the sample size and also to widen the time frame so that it can produce more robust findings. Furthermore, the next similar study can use more sophisticated method of analysis in order to produce more robust findings.

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