Profitability Determinants of Islamic and Conventional Banks During the Global Financial Crises: The Case of Emerging Markets

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1 Introduction

Nowadays the banks play a significant role in our society, and it is not even possible to imagine the life without banks, in other words the banks have become a blood vein of our economy. In order to stimulate the economy of any specific country the government does this via banking system by using "Monetary Tools". Moreover, all of the finance and business transactions that we are being involved in are done through the banks. The first establishment of conventional bank was with no interest, and then it was added and has become the main source of earnings of banking system.

In addition to, many alternatives viewed in contrast to Conventional Banking System but only one is reflected as an optimum option in the horizon that may replace Conventional Banking System (CB System) which is Islamic Banking System (IB System). Alongside of Traditional Banks, Islamic Banks have started playing a vital role in contribution to economy of a country since 1970s. One of the significant differences between Conventional Banking and Islamic Banking is that in IB the interest rate is prohibited. Furthermore, the interest rate is the main source of income that conventional banks are receiving, whereas in Islamic Banks "profit/loss sharing" and buying/selling methodologies are being used. It shows that incomes generated in both banks are different.

Moreover, many studies have been conducted to measure profitability of Islamic Banks, Akhtar et al. (2011), they measured the factors that influence the profitability of Islamic Banks of Pakistan. The main focus of this study is to evaluate and measure the financial performance of the Islamic banking firms operating cross countries. In other words, it is very significant to learn which variable exerts more influence on profitability in Islamic Banks, and so all concentration will be directed to that specific variable. Furthermore, they are many existing studies where profitability determinants differences have been measured between Islamic and Conventional Banks. In contrast to one of the studies of Samad and Hassan (1999), our paper deviates in terms of main earnings indicator such as Spread. This indicator has not been used in the article of Bashir (2001). To evaluate performance of the banks empirically, different financial ratios are going to be employed as well. Likewise, in this work the economic factor and

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the efficiency of banks will be adopted, unlike the study of Alkassim (2005) and Akhtar et al. (2011). In accordance with this aim of this study several banks randomly have been selected across the countries and whose performances were measured to find out the relationship between profitability determinants and variables. The measurement of performance will be based on CAMEL framework. In this study, regression analysis will be applied to see the influence of explanatory variable on determinants of profitability. First of all, OLS has been employed which is based on country cross bank level data: General Model Regression and Specific Model Regression Analysis. General Model Regression Analysis of All Banks includes all banks across the countries. However, Specific Model Regression Analysis all banks are separated into Islamic and Conventional Banking. As result it can be said that profitability indicators of all banks are positively related to capital adequacy of the banks, except ROE. So the probability of defaults is low because the banks have sufficient amount of capital that keeps out the banks of any difficulties in payments that banks may face. However we found that economic growth does not exert any influence on determinants of profitability because they are statistically insignificant, but only Net Interest Margin is inversely related to GDP growth over period 2006–2012. As a separate comparison of Islamic and Conventional Banks showed differences in profitability measures with relation of, management, asset quality and capital adequacy, but scales of banks do not exert any impact on profitability of banks. However, the impact of SPREAD on both IB and CB tells different story; that is to say, interest rate spread does not exert an influence on both of profitability indicators.

2 Literature Review

2.1 Islamic Banks

The comparative analysis of Islamic and Conventional Banks in terms of profitability determinants which is based on CAMEL approach is very vital. All banks are playing a significant role in contribution to the growth of the economy. And many studies are done to improve the profitability indicators and bank characteristics. Recent paper works have employed different characteristic, structures, macroeconomic variables of bank level data across countries. Those papers which are outlined in this chapter done by Bashir (2001), Samad and Hassan (1999), Ariss (2010), Alkassim (2005), Hassan and Bashir (2003), Chukwuogor (2008), Liu and Tripe (2003), Kosmidou et al. (2004) and Spathis (2002).

Hassan and Bashir (2003) have continued to conduct regression analysis of Bashir (2001) study, in order to improve the estimation by adding some dependent and independent variables such as: macroeconomic variables, profitability indicator and financial structure. The added dependent variable as a profitability indicator is Net Non Interest Margin. First of all, they both preceded empirical analysis on relationship of bank characteristics with performance measure of Islamic Banks. As a result, they found that profitability indicators is positively related to capital ratio and it is consistent with previous study of Bashir (2001) and it has inverse association with loan ratios.

The empirical results disclosed that high of capital ratio or equity over assets directs to higher profit margin. Furthermore, they had found that NNIM (net non interest margin) positively related to OVERHEADS, that tells us the more banks are earning the more the salaries and wage will be distributed. The tax structure of government is the same empirically important impact on profitability indicators as in previous study of Bashir (2001). However the reserve requirement ratio does not have a strong impact on financial performance measure of Islamic banks. On one hand, the favorable macroeconomic environment is said to have positive impacts on profit margins, GDP growth increases which lead to an increase in performance measure of Islamic Banks. However, the GDP per capita and Inflation are not statistically significant, in other words they don't have much effect on performance measure of Islamic Banks. Finally, the size of banking system has negative impact on determinants of profitability, except of NNIM.

According to study of Alkassim (2005) who aimed to identify profitability of determinants of Islamic Banks and Conventional Banks. The profitability indicators ROE, ROA, and NIM of two different types of banks are compared. As independent variable he used: logarithmic of total assets, equity to assets, deposit to assets, total loans to assets and etc. He used cross country bank level data for Gulf Cooperation Council GCC countries to conduct Ordinary Least Square. He found the results which are consistent with Hassan and Bashir (2003) for Islamic Banks, and he also found in his analysis relationships between banks' characteristics and profitability indicators for Conventional Banks. The result of variables showed their reflection towards profitability indicators differently. The logarithmic total assets TA have negative relationship with performance measure in Conventional Banking System, but positive in Islamic Banking System. The capital ratio or equity ratio has got negative association with performance measure of Conventional Banks and positive connection with Islamic Banks' profitability indicators. He also found that lending improves the profitability of both Islamic and Conventional Banks, in other words total loans are positively related to determinant of profitability of both banks. In addition to, he had found that deposit ratio has inverse relationship with profit margins for Islamic banks which is consistent with previous studies of Bashir (2001), Hassan and Bashir (2003). However, deposits are positively related with profitability determinants for Conventional Banks. OVERHEADS of both Islamic and Conventional Banks are positively related to determinant of profitability.

Spathis (2002) study, he aimed to investigate the difference between profitability and efficiency of small and large Conventional Banks in Greek. In other words, he just classified the conventional banks into small ones and large ones, based on their scale or total assets. In order to investigate profitability and efficiency of Greek banks, Spathis (2002) has used a multicriteria methodology, that is to say he applied M.H.DIS and UTADIS to identify that affect the ratios of Greek banks. The evidence points out those large banks are more efficient than small ones. In his study, he found that small banks described by high capital yield ROE, high interest yield MARG, high financial leverage TA/TE, and high capital adequacy TE/TA. Large banks are distinguished by asset yield, and low capital and interest rate yield. M.H.DIS and UTADIS support the results of regression analysis.

Samad and Hassan (1999) assessed the differences of performance measures of Bank Islam Malaysia Berhad BIMB and eight Conventional banks in terms of profitability, liquidity, risk and solvency. They come up with output of empirical results stating that BIMB relatively is more liquid and less risky compared to the group of eight Conventional banks. In addition, Islamic banks showed significant progress on ROA and ROE during 1984–1997. However Samad and Hassan (1999) found that comparison of BIMB with group of 8 banks showed that difference in performance measures are statistically insignificant. They also found that the risk in BIMB increased and it is statistically significant.

Kosmidou et al. (2004) evaluated performance and efficiency of commercial and cooperative bank in Greece and Europe for the period 2003–2004. He has taken 16 cooperative banks and 14 commercial banks. And banks are divided into two group large banks and small ones in terms of total asset. Evaluation based on CAMEL framework by employing financial accounting ratios such as equity to assets, EBT/TA, EBT/TE, Loans to assets, and etc. He used multi criteria method to evaluate performances of commercial and cooperative banks. In comparison to cooperative banks, commercial banks are likely to increase their accounts, more competitive, and increasing market share in general.

Liu and Tripe (2003) studied the relationship between capital level and return on equity of banks in New Zeeland and Australia for the period 1996–2002. He took 9 Australian banks and 6 New Zeeland banks. GDP and interest rate was considered in empirical analysis as well. He categorized Australian banks into large and small banks, but New Zeeland banks were estimated separately. Ganger causality test used to see whether there is relationship between the capital ratio and return on equity. As a result he found moderate positive relationship between capital level and ROE in both countries. There is economic environmental positive effect on profitability, and in New Zeeland interest rate has same effect on profitability, but it is unclear whether it has causative relationship with profitability.

3 Methodology

We use the standard model used by Hassan and Bashir (2003) and Spathis (2002) to test the determinants of profitability of Islamic bank and conventional bank. However, in this study, we use three dependent variables, as proxy for financial performance, i.e., return on equity (ROE), return on assets (ROA) and net interest margin (NIM), but Net Income Margin (NIM) for IB. Each dependent variable is separately specified as follows:

$$\mathrm{ROE} = \alpha 1 + \beta 1(\mathrm{CR}) + \beta 2(\mathrm{TETA}) + \beta 3(\mathrm{PLLTL}) + \beta 4(\mathrm{LD}) + \beta 5(\mathrm{LTA}) + \beta 6(\mathrm{LIQD}) + \beta 7(\mathrm{GGDP}) + \beta 8(\mathrm{SPREAD}) + \varepsilon$$

$$\mathrm{ROA} = \alpha 2 + \beta 1(\mathrm{CR}) + \beta 2(\mathrm{TETA}) + \beta 3(\mathrm{PLLTL}) + \beta 4(\mathrm{LD}) + \beta 5(\mathrm{LTA}) + \beta 6(\mathrm{LIQD}) + \beta 7(\mathrm{GGDP}) + \beta 8(\mathrm{SPREAD}) + \varepsilon$$

$$\mathrm{NIM} = \alpha 3 + \beta 1(\mathrm{CR}) + \beta 2(\mathrm{TETA}) + \beta 3(\mathrm{PLLTL}) + \beta 4(\mathrm{LD}) + \beta 5(\mathrm{LTA}) + \beta 6(\mathrm{LIQD}) + \beta 7(\mathrm{GGDP}) + \beta 8(\mathrm{SPREAD}) + \varepsilon$$

where CR represents the Cost to Revenue, CR represents the Cost to Revenue, TETA represents Total Equity to Total Asset, PLLTL represents Provision of Loan Losses over Total Loans; LD represents Loans to Deposits, LTA represent the logarithmic of Total Assets, LIQD represents Liquid Assets to Deposits, GGDP represents Gross Domestic Product Growth, SPREAD represents Interest rate Spread or difference between Lending rate and Deposit rate, and E represents error term.

The balanced panel data has been used to conduct the empirical analysis on determinants of profitability of Islamic and Traditional Banks that comes from financial statements in emerging markets. The cross-country bank-level data has been gathered from Bankscope, Bankersalmanac, World Bank databases and Central Bank of Turkey for the selected countries over period of 2006–2012. This period specifically has been selected to cover fully global financial crises period. The number of countries and banks both Islamic and Conventional are 5 and 36 respectively. The size of both Islamic and Traditional banks is approximately same, and number of Islamic Banks are 18. Countries are: Turkey, Egypt, Malaysia, Pakistan and UAE.

In order to test the data whether data is stationary or not, panel root test have been employed to each variable. According to methodologies developed by Levin, Lin and Chu (LLC) the data reject the null hypothesis, that is to say the unit root does not exist in our whole model or the data is stationary. Likewise, if data was not stationary then Level Equation and ECM by using ARDL method, Bound Test and Ganger Causality test would be applied, in order to find out whether there is or not long run relationship between the variables as it was applied in contrast Katircioglu (2009). Furthermore, the presence of multicollinearity in our regression model is tested. According to correlation between independent variables are very low in both regression model, Whole and Pure Models Regression, and R square are very low which proves the absence of multi-collinearity, correlation table is represented in Chap. 4 and it has been corrected for heteroskedasticity.

Accounting ratios are classified as dependent and explanatory variables. Dependent variables are Return On Equity, Return On Asset; Net Interest Margin expressed as percentages. Explanatory or independent variables are Total Equity over Total Assets, Liquid Assets over Deposits, Provision Loan Losses to Total Loans, Cost to Revenue, Loans over Deposits, Gross Domestic Product growth as % percentages, logarithmic of Total Assets and Interest rate Spread. The main focus of this study will be on SPREAD that stands for interest rate spread, and it is expected that SPREAD will have positive association with profitability determinants in conventional banking system. These variables are used correspondingly with selected five countries which are Turkey, Malaysia, Pakistan, United Arab Emirates and Egypt. Moreover, while measuring, evaluating and comparing the financial performances of Islamic and Conventional Banks, all important financial and operational factors will be taken into account by using CAMEL approach in this comparative study. CAMEL is rating system which measure financial performance of financial institutions and banks that gives information about financial validity.

In this comparative study ordinary regression equation is employed to measure and evaluate the difference in financial performance of the Islamic and Conventional Banks, and next step is taken to compare those results between two different types of banks. We conduct regression analysis by using Eviews software program to estimate our equation. In accordance with Hausman test which is done in panel data regression analysis as well, the "Cross Section Random Effects" model has been used because our sample data does not represent whole population. Additionally, and due to small number of groups which is 36 and time is only 4 years we have used cross section random effects model. Furthermore, three dependent variables used in this ordinary least squares: ROE, ROA and NIM. Other variables are considered as independent ones and demonstrated bellow in the models.

4 Empirical Analysis and Results

4.1 Correlation Analysis

The Correlation analysis points out the relationship of variables among themselves. The correlation is demonstrated in (Table 1). The variables are classified into three groups: All banks, Conventional banks and Islamic Banks. Correlation Analysis is applied to predict how independent variables that are based on CAMEL approach will be correlated with profitability indicators or dependent variables. Another purpose of correlation is to test for multicollinearity problem, in other words whether independent variables are highly correlated with each other or not.

Let us see first part or group. The efficiency of the all banks is inversely correlated to ROE and ROA, except NIM. However the positive correlation between CR and NIM is very low. In other words, the earnings quality of the banks reacts negatively to any change of profitability determinants. The scale of banks is negatively correlated with profitability determinants of banks and it is consistent with Alkassim (2005). Furthermore, the asset quality is inversely related to ROE, ROA and NIM, but coefficient correlation of ROE is low. The Economic growth is positively related to profitability measures and it is consistent with findings of Bashir (2001), Hassan and Bashir (2003). However, NIM is the opposite. The capital adequacy is positively associated with ROA and NIM, except the ROE. Previous findings of Alkassim (2005) which is different. Liquidity indicator has inverse correlation with profitability indicators and which is inconsistent with previous findings.

On other hand, we have run correlation analysis separately for each type of bank namely Islamic and Conventional ones. The efficiency of both types of banks is cost to revenue correlated to profitability indicators, but NIM. Capital adequacy ratio of Islamic and Conventional Banks are only negatively associated with ROE, however towards other both determinants of profitability for only CB, TE_TA is positively related. Alkassim (2005) found same output of his correlation analysis. In both banks the liquidity is inversely correlated to profitability measures. The asset quality ratio is negatively correlated with ROE in CB, but in IB it is positively associated with ROE. And it is the same with the size of banks, that is to say the scale of banks are positively

Table 1. Correlation analysis

All banks											
	ROA (%)	ROE (%)	NIM (%)	TETA (%)	PLLTL (%)	LD (%)	CR (%)	LIQD (%)	GDPG (%)	LTA (%)	SPREAD (%)
ROA	100	77	−13	−20	−43	15	−74	11	16	−12	−31
ROE	77	100	−5	−35	−27	−2	−64	2	16	1	−22
NIM	−13	−5	100	26	−9	7	26	−27	−21	25	20
TETA	−20	−35	26	100	5	25	32	11	−12	−7	19
PLLTL	−43	−27	−9	5	100	−5	44	7	7	−5	28
LD	15	−2	7	25	−5	100	−25	−5	2	17	−12
CR	−74	−64	26	32	44	−25	100	−4	−11	7	41
LIQD	11	2	−27	11	7	−5	−4	100	13	−38	−46
GDPG	16	16	−21	−12	7	2	−11	13	100	−2	10
LTA	−12	1	25	−7	−5	17	7	−38	−2	100	25
SPREAD	−31	−22	20	19	28	−12	41	−46	10	25	100
Conventional banks											
ROA	100	85	−16	−35	−55	16	−75	17	19	−22	−45
ROE	85	100	−18	−51	−41	−1	−71	20	21	−16	−33
NIM	−16	−18	100	36	12	20	24	−39	−21	21	36
TETA	−35	−51	36	100	34	51	42	−8	−9	21	10
PLLTL	−55	−41	12	34	100	−8	58	−7	5	7	52
LD	16	−1	20	51	−8	100	−30	−5	6	33	−26
CR	−75	−71	24	42	58	−30	100	−11	−13	7	48
LIQD	17	20	−39	−8	−7	−5	−11	100	20	−40	−61
GDPG	19	21	−21	−9	5	6	−13	20	100	−2	7
LTA	−22	−16	21	21	7	33	7	−40	−2	100	26
SPREAD	−45	−33	36	10	52	−26	48	−61	7	26	100
Islamic banks											
ROA	100	74	−12	−19	−9	8	−72	−14	16	13	0
ROE	74	10	−3	−32	4	−2	−52	−17	10	23	−11

(*continued*)

Table 1. (*continued*)

All banks											
	ROA (%)	ROE (%)	NIM (%)	TETA (%)	PLLTL (%)	LD (%)	CR (%)	LIQD (%)	GDPG (%)	LTA (%)	SPREAD (%)
NIM	−12	−3	100	27	−19	−11	43	16	−22	33	2
TETA	−19	−32	27	100	−15	13	37	34	−14	−22	26
PLLTL	−9	4	−19	−1	100	−1	8	16	12	−26	−2
LD	8	−2	−11	13	−1	100	−9	−12	−4	−16	20
CR	−72	−52	43	37	8	−9	100	8	−8	6	31
LIQD	−14	−17	16	34	16	−12	8	100	4	−48	−22
GDPG	16	1	−22	−14	12	−4	−8	4	100	−3	13
LTA	13	23	33	−22	−26	−16	6	−48	−3	100	24
SPREAD	0	−11	2	26	−2	20	31	−22	13	24	100

related to ROE for IB, but opposite for CB. And it is consistent with previous findings. The profitability measures of Islamic banks are positively correlated to loan to deposit ratio LD that is loans which are being funded through deposits, whereas in Conventional Banks are inversely related.

4.2 Regression Analysis

In this chapter we will talk about the output of regression analysis which is applied on financial ratios of both Islamic and Conventional banks, in order to explain how any changes in independent or explanatory variables may affect the determinants of profitability or the dependent variables of these banks which are Return On Equity, Return On Asset and Net Interest Margin/Net Income Margin. We have estimated nine regression analyses which are categorized into two main models: General and Specific Regression Models. Moreover, General Model consists of regression analyses of all banks, in other words firstly all banks have been taken into consideration namely Islamic Banks and Conventional Banks to regress dependent variables or profitability determinants. Then, regression analysis is applied on both Conventional and Islamic Banks separately and the results are compared.

4.3 General Model Regression Analysis of All Banks

Firstly, according to classification all banks show the effect of bank characteristics, macroeconomic variable and dummies of banks on financial performance of all banks over period 2006–2012. General Model of Regression Analysis is shown below in (Table 2). There are three dependent variables in our model ROE, ROA, and NIM. In the first regression estimation model, only ROA has positive significant association with capital adequacy ratio TETA, that is to say the more capital in the banks will lead to more profits. There is negative relationship between ROA and NIM with asset quality ratio "provision of loan losses over total loans", so the lower the ratio the better the banks are in terms of profitability. As PLLTL ratio increases it means the written off loans goes up and that lost amount will be excluded from net income in the statement of profit and loss account, that's why net income to total assets ratio goes down. The bigger the PLLTL in the banks the more problems bank will have. Furthermore, there is inverse association between ROE and management quality ratio total loans over total deposits, simply to say, the reduction in the ratio is due to increase in Total Deposits which will lead to increase in interest expenses in Income Statement that will reduce Net Income as result, it will decrease the ROE. In general the banking sector they could not finance their accepted deposits in efficient way; in other word they were not able to find creditworthy borrowers. ROE and ROA have statistically significant negative relationship with cost to revenue ratio, as efficiency of banks increases the ROE and ROA increases. Alkassim (2005) has come up with same results where he estimated all banks of gulf countries. On other hand, determinants of profitability of all banks are not affected by the size LTA logarithmic total assets due to statistical insignificance over

period 2006–2012, except NIM. There is positive effect exerted on NIM by size of banks which indicates that as banks decide to expand their businesses by opining new branches, it will make the banks to generate more profits by lending to potential borrowers. As we know that large banks are serving large customers such big enterprises. Likewise, Liquid assets to deposits ratio exerts no effect on the profitability determinants ROE, ROA and NIM all banks at all for the period 2006–2011 because they are statistically insignificant. GDP growth does not have any influence on determinants of profitability of ROE and NIM. This is due to limitation on data. However, ROA has been positively affected by GDPG and statistically significant. So the profitability of bans is affected by economic growth of a specific country. The Dummy of banks that coded Islamic bank as 1 and Conventional Banks as 0. According to results there is positive relation with NIM and ROE which are statistically significant. In other words, the coefficient is close to 1 that states there is difference in profitability determinants between Islamic Banks and Conventional Banks. NIM is referred for Islamic Banks as net income margin such as, fees from foreign exchanges, from profit loss and share PLS from financing activities, service charges and etc. almost whole the profits of Islamic banks are coming from NIM. The whole models of ROE, ROA and NIM are reliable and best fitted due to F-test probability values which are statistically significant. R's squared are all very low less than 50%, that depicts the variation in profitability can be explained by variation in financial ratios by less than 50%.

Table 2. All banks

	ROA		ROE		NIM	
IND. variables	Coefficient	Prob. value	Coefficient	Prob. value	Coefficient	Prob. value
C	4.248934	0.0069*	15.49868	0.0183**	−0.487892	0.7138
TETA	0.01079	0.0383**	−0.070909	0.1789	0.020136	0.1842
PLLTL	−0.046495	0.0613***	−0.035556	0.7782	−0.027865	0.0771***
LD	0.001236	0.5975	−0.008981	0.0006*	−0.000253	0.9034
CR	−0.035014	0.0000*	−0.22631	0.0000*	0.011324	0.1736
LIQD	−0.001345	0.8578	0.049866	0.4105	−0.002921	0.5197
DUM	−0.458399	0.2255	2.568093	0.0693***	0.909031	0.0272**
GDPG	0.061139	0.0639***	0.345227	0.3442	−0.062832	0.2027
LTA	−0.135989	0.1609	0.159208	0.7240	0.291203	0.0047*
SPREAD	0.026629	0.7756	0.780333	0.5499	0.00039	0.9979
	R-squared	0.499529	R-squared	0.384558	R-squared	0.210391
	F-statistic	10.97928	F-statistic	6.873319	F-statistic	2.842123
	P-VALUE	0.000000	P-VALUE	0.000000	P-VALUE	0.005204
	D.-Watson	1.745841	D.-Watson	1.506459	D.-Watson	1.668997

4.4 Specific Model Regression Analysis of Islamic and Conventional Banks

As we go through the results of regression analysis of Islamic Banks and Conventional Banks separately by comparing the relationship between profitability determinants and explanatory variables. According to empirical results of regression analysis on conventional banks, assuming nothing changes in the independent variables, the ROA and ROE will increase by 6.49 and 18.40 units respectively, and they are statistically significant. But in Islamic Bank, if nothing changes the ROE will increase by 25.85 units and NIM will go down by 3.5 units. Capital adequacy in Conventional Banking affects the return on assets positively and it is statistically significant. As total asset increases, the both ROA and Capital Adequacy fall down. However there is inverse relationship between ROE and Capital Adequacy, which is statistically significant. This is due to decision to keep more capital inside the bank, as banks increase total equity which will reduce ROE, but the ratio of capital adequacy will increase. In contrast to Conventional banking system, in Islamic banking system ROA and ROE positively associated with Capital adequacy. There is negative relationship between all profitability determinants and asset quality ratio "provision of loan losses over total loans" in both banking system, so the lower the ratio the better the banks are in terms of profitability. As PLLTL ratio increases it means the written off loans goes up and that lost amount will be excluded from net income in the statement of profit and loss account, that's why net income to total assets ratio goes down. The bigger the PLLTL in the banks the more problems bank will have. In addition to, management quality ratio has negative effect on ROE only and it is statistically significant in Conventional Banking system. The inverse association between ROE and management quality ratio total loans over total deposits, simply to say, the reduction in the ratio is due to increase in Total Deposits which will lead to increase in interest expenses in Income Statement that will reduce Net Income as result, it will increase the ROE. But in Islamic Banking, NIM has got negative significant relationship. According to the result of both Islamic and Conventional Banking systems, ROE and ROA have statistically significant negative relationship with cost to revenue ratio, as efficiency of banks increases the ROE and ROA increases, except NIM. Likewise, as expenses are increasing, the profits are going down. In Conventional Banking GDPG is affecting negatively NIM, it is statistically significant which is not consistent with one of the outstanding articles of Bashir (2001) and Hassan and Bashir (2003). The reason is that as the whole economy grows, people receive high paid salary and the need for loan falls, as the demanded loans go down, the bank's interest charges will go down so that profitability determinants is expected to fall down. However in Islamic Banking, ROE is positively related with GDPG and it is statistically significant. As economy grows that Islamic banks start to generate more revenue, as a result the net income will increase that will lead to an increase in ROE. To sum up, three models of Islamic Banking are best fitted due to significance of "F" coefficients, whereas in Conventional one, only 2 models are best fitted, ROA and ROE (Tables 3 and 4).

Table 3. Conventional banks

	ROA		ROE		NIM	
IND. variables	Coefficient	Prob. value	Coefficient	Prob. value	Coefficient	Prob. value
C	6.49177	0.00140*	18.40609	0.00060*	1.37874	0.53690
TETA	0.00645	0.86430	−0.24841	0.00660*	0.07228	0.02370**
PLLTL	−0.05168	0.08490***	−0.01934	0.89820	−0.04058	0.02170**
LD	−0.00007	0.98350	−0.01822	0.00560*	0.00464	0.32630
CR	−0.03570	0.00000*	−0.21469	0.00000*	0.00564	0.36490
LIQD	−0.00324	0.73410	0.05536	0.31680	−0.00333	0.43360
GDPG	0.12498	0.13900	0.43637	0.27170	−0.11805	0.02240**
LTA	−0.30858	0.07080***	0.11221	0.82470	−0.07794	0.69630
SPREAD	−0.09362	0.66070	0.52315	0.49010	0.27708	0.39390
	R-squared	0.61293	R-squared	0.57886	R-squared	0.18711
	F-statistic	9.69882	F-statistic	8.41900	F-statistic	1.38110
	P-VALUE	0.00000	P-VALUE	0.00000	P-VALUE	0.22887
	D.-Watson	1.45757	D.-Watson	1.36613	D.-Watson	1.97013

Table 4. Islamic banks

	ROA		ROE		NIM	
IND. variables	Coefficient	Prob. value	Coefficient	Prob. value	Coefficient	Prob. value
C	0.7053	0.4011	25.851	0.003	−3.54064	0.00290
TETA	0.0356	0.0087	0.140	0.034	−0.01446	0.52770
PLLTL	−0.0380	0.0139	−0.043	0.814	0.00984	0.55260
LD	−0.0002	0.9389	−0.005	0.783	−0.00293	0.04490
CR	−0.0224	0.0014	−0.230	0.000	0.00853	0.30880
LIQD	−0.0001	0.9840	−0.013	0.807	−0.00436	0.52610
GDPG	0.0223	0.2861	0.397	0.066	−0.03252	0.41670
LTA	0.0205	0.6949	−0.592	0338	0.76306	0.00000
SPREAD	0.1524	0.1394	0.472	0.400	0.01447	0.92050
	R-squared	0.92632	R-squared	0.9333	R-squared	0.89817
	F-statistic	22.35045	F-statistic	24.8738	F-statistic	14.70002
	P-VALUE	0.00000	P-VALUE	0.0000	P-VALUE	0.00000
	D.-Watson	1.73830	D.-Watson	1.9100	D.-Watson	2.51800

5 Conclusion

Alongside with traditional banks, Islamic banks have started involving with their principles and rules that exclude interest rate and speculative transactions. And the purpose of this study is not to say that Islamic banks are better off than traditional banks

from our empirical results of regression analysis. There are the differences in financial performances between Conventional Banks and Islamic banks which are found in overall picture of all banks in terms of NIM by using DUM. Then we estimated Islamic banks and Conventional Banks separately to touch those differences in detail. Firstly all banks are examined to find differences and similarities in terms of profitability and then both Islamic and Conventional Banks are evaluated separately.

For instance, as it is shown in our empirical results as the cost increases the profitability decreases for all banks, in other words the efficiency is positively related with profitability indicators, except NIM which is positively related to cost to revenue and they are all statistically significant. This relationship is unexplainable and this may be because of limitation on data. GGDP is inversely related with profitability indicator NIM and statistically significant for the period 2006–2012, that is to say during this period there was recession which affected financial organizations' profitability negatively. Finally, the difference found between Islamic Banks and Conventional banks in terms of profitability determinant NIM, in other words DUM variable is positively related and statistically significant with NIM. NIM is main source of income for Islamic banks.

First of all, let us consider the capital adequacy, TETA has inverse relationship with profitability indicators such as ROE for Conventional banks and statistically insignificant, unlike Islamic banks. No difference found between Islamic banks and conventional ones in terms of profitability determinant ROA which is negaively related to provision of loan losses to total loans PLLTL and statistically significant for IB, unlike CB. Generally as PLLTL increases the more problem the bank may face. No difference found in relationship of profitability determinants and Cost to Revenue ratio. The size of banks is affecting negatively the ROA in conventional banking system, and it is statistically significant. As total assets increase the ratio of ROA falls. However, the LTA has positive significant effect on NIM in Islamic Banks. So well capitalized Islamic banks will earn more profits. The growth of economy has got negative impact on NIM of Conventional Banks, whereas in Islamic banks GDPG has positive significant relationship with ROE. The empirical results showed that dependent variable or all profitability determinants are affected by all independent variables in some ways were the different, but in some ways were same.

In further research, by increasing number of banks, macroeconomic variables and countries we will have more accurate evaluation the profitability measure of two different types of Banks. In this research accessibility of data was limited and that's why there might be unreasonable relationship between variables as well. For example, Cost to Revenue is positively related and statistically significant with Net Interest Margin. We need full access to databases such as Bankscope and Bankersalmanaca so that we will be able to do comprehensive empirical evaluation of profitability determinants.

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