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Islamic Banks versus Commercial Banks and Performance: The Context of Saudi Arabia? Khalid Hamad Alturki¹ and Khalid Hamad Alturki² ¹ Qassim University *Received: 12 December 2013 Accepted: 5 January 2014 Published: 15 January 2014*

7 Abstract

8 Making a comparative analysis between conventional and Islamic banks, this paper examines

9 which bank characteristics and macroeconomic environment affect the bank performance in

¹⁰ Saudi Arabia. We estimate a linear panel date model using Prais-Winsten technique for 12

¹¹ Saudi conventional and Islamic banks over the period 2005-2011. The findings suggest that

12 low cost, high capital adequacy and low inflation rate improve the levels of Saudi conventional

¹³ bank performance. However, high performance in Saudi Islamic banks requires better asset

¹⁴ quality, higher capital adequacy, lower cost, higher bank weigh and higher number of branches.

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16 Index terms— financial accounting, saudi bank perfor-mance, islamic versus conventional banks, prais-17 winsten method.

18 1 Introduction

slamic banking is a growing worldwide phenomenon; in particular, the number of Islamic financial institutions has
 increased significantly in the Middle East and Southeast Asia. Moreover, more International financial Institutions
 in Europe and the United States are adopting some Islamic

21 in Europe and the United States are adopting some Islamic.

Instruments to attract investors who prefer the use of Islamic credit instruments, such as Murabaha, Mudaraba,
Musharaka and Ijara. "It is expanding not only in nations with majority Muslim populations, but also in other
countries where Muslims are a minority, such as the United Kingdom and Japan" (Solé j,2008).

In Saudi Arabia, there are 23 banks of which 12 banks are national and 11 banks are foreign. Out of the

12 national banks, there are only 4 Islamic banks and the remaining 7 are commercial banks. Saudi national banks contribute by 8.2 percent to the total global Islamic finance assets. The total assets of the Saudi banks

has increased from SR 1,075 billion (about US\$ 287 billion) in 2007 to SR 1,544 billion (about US\$ 412 billion)

in 2011 ??SAMA, 2012). The total assets of Islamic banks has increased from SR 7.1 billion (about US\$ 1.9
billion) in 2007 to SR 182.6 billion (about US\$ 49.6 billion) in 2011.

The main aim of this study is to investigate the accounting differences in performance between the Saudi national Islamic banks and national commercial banks. The paper also investigates different factors influencing the two sets of banks' performance. Due to the impact of the current financial crisis, there is a high demand for Islamic banking services, which encouraged one Saudi conventional bank to switch to Islamic accounting practices and to offer Islamic banking services. This new development in Islamic banking industry motivates the writer to investigate some factors influencing Saudi Islamic banks' accounting performance compared with that of the national conventional banks.

The next section of the paper provides a brief literature review related to the bank performance. Section two presents the methodology employed while section three presents the study estimations and results. In the final section a brief summary of the paper and conclusions of the main results is provided.

41 **2** II.

42 **3** Related Literature

The enormous influence of banking sector on economic growth has encouraged many studies on factors affecting 43 banking accounting performance. Most of the studies have concentrated in few countries, mainly developed 44 countries while few concentrated in developing countries such as Saudi Arabia. Sun et al. (2010) evaluated 45 the relationship between ownership structure and bank performance for 221 banks in 17 MENA countries. The 46 authors differentiated between private and governmental banks and clarified the effects of numerous structural 47 and reform measures on the inconsistency of bank performance in the MENA region. As a result, private banks, 48 specifically foreign banks, perform better than government banks. Moreover, foreign publicly traded banks from 49 50 the same region, or any foreign banks are tend to have better performance. Kosmidou (2008) using an unbalanced 51 pooled time series dataset of 23 banks investigated the determinants of performance of Greek banks during the period of EU financial integration in the period 1990-2002. The author used the ratio of return on average assets 52 53 (ROAA) as a measurement of bank performance and classified them into internal and external determinants. 54 The internal set included: the cost to income ratio, the ratio of equity to total assets, the ratio of bank's loans to customer and short-term funding, the ratio of loan loss reserves to gross loans and the bank's total assets. The 55 external set included: the annual change in GDP, inflation rate, the growth of money supply, the ratio of stock 56 market capitalization to total assets, the ratio of total assets to GDP and concentration. The results showed 57 that ROAA was found to be associated with well-capitalized banks and with lower cost to income ratios. The 58 results also indicated that the impact of size and the growth of GDP was positive, while inflation had a significant 59 60 negative impact. Elmoussawi et al. (2009) compared the efficiency of banks with majority of domestic ownership, 61 banks with majority of foreign banks, and foreign banks subsidiaries operating in Lebanon from 1996-2005. They used DEA methodology for three groups of banks to calculate the yearly scores for cost effectiveness, technical 62 and allocation. In addition, they extended their study to determine the factors that shape bank efficiency. Their 63 results didn't show big differences between the three groups. In spite of this, their evaluation of the efficiency 64 scores shows an improvement in the performance of banks with majority foreign ownership, and weakening in 65 performance of banks with majority of domestic ownership and foreign banks subsidiaries. They also concluded 66 that bank efficiency is differently determined based on bank ownership. Okpara (2009) determined the major 67 factors that influence the banking system in Nigeria. Using factor analysis techniques, the author concluded 68 that undue interference from board members, political crises, undercapitalization, and fraudulent practices are 69 70 considered the most critical factors that impact the performance of banking system in Nigeria. Sufian (2009) 71 investigated the determinants of bank profitability in Malaysian financial sector during the period 2000-2004. The results showed that higher credit risk and higher loan concentration lead to lower profitability level. On the 72 73 contrary, banks with higher income from noninterest sources, higher level of capitalization, and higher operational expenses face higher profitability level. Tarawneh (2006) divided the commercial banks in Oman in cohesive 74 categories depending on their financial characteristics revealed by financial ratios. Using simple regression 75 analysis, the followings were determined: the effect of asset management, operational efficiency, and bank size 76 on the financial performance of five Omani commercial banks with more than 20 branches. The results indicated 77 that bank with higher total capital, deposits, credits, or total assets do not always represent a better profitability 78 79 performance. Athanasoglou et al. (2006) investigated the bankspecific, industry-specific and macroeconomic 80 determinants of bank profitability in Greek. The results indicate that all bank specific determinants, excluding size, significantly affect bank profitability in the anticipated way. Jham et al. (2008) considered satisfaction 81 with banking services as the main determinant of bank Performance, The authors demonstrated how adoption 82 of satisfaction variables can lead to better performance, and how customer satisfaction was linked with the 83 performance of the banks. Unal et al., (2007) conducted a comparative performance analysis between the Turkish 84 state-owned and private commercial banks during the period 1997-2006. They used net profit-loss, return on 85 assets and return on equity as proxies to measure profitability. To measure operating efficiency they used net 86 profit, net assets efficiencies relative to total employment and total number of branches. The findings suggested 87 that stateowned banks are as efficient as private banks. Chirwa (2003) investigates the relationship between 88 market structure measured by concentration and profitability of commercial banks in Malawi using time series 89 90 data between 1970 and 1994. He concluded that there was a positive relationship between concentration and 91 performance.

Ahmed et al (1999) used three measures of profitability (ROE, ROA and percentage change in earnings per share) as dependent variables and four independent variables (business risk, market concentration, market size and size of the bank). The results indicated that the business risk and the bank size were the main determinants of the banks' performance.

Based on the above previous studies, it can be concluded that several studies have been conducted all over the
 world that investigated some factors influencing bank performance, however, no studies have investigated Saudi
 bank accounting performance with full differentiation between Islamic and commercial banks.

99 **4** III.

100 5 PRESENTATION OF VARIABLES

101 In order to examine the determinants of Saudi bank's performance, we try to present a model linking 102 the profitability of banks and a set of factors that takes into consideration the patterns of banks and the 103 macroeconomic situation in Saudi Arabia.

In its simplest form, the linear equation that must be estimated for each bank i at each time period t is:, =, +, +, +, (1)

Where perf i,t is an indicator of bank's profitability, Z i,t is a vector of the bank's characteristics, V i,t is a vector of macroeconomic indicators and i,t is the disturbance term.

In this study, the dependent variable is the bank profitability. Basing on banking literature, there are several proxies that can measure the performance of banks. Among these proxies, one can cite the return on assets (ROA), the return on equity (ROE), the profit margin (PBTA) and net non-interest margin. Most studies have used ROA and ROE as a measure of measures to give more explanations about the determinants of performance of Saudi banks.

Concerning the ROA, this proxy is measured as the ration of net profit after tax over average assets. It reflects the ability of bank to manage its real investment and financial resources. However, the ROE is defined as the net profit after tax over the shareholders' equity. This indicator assesses whether a bank operates perfectly its shareholders funds. The third and last indicator of profitability in this study is the PBTA. The profit margin is expressed as the net profit before taxes as a percent of the total assets. The PBTA shows the ability of a bank to obtain high profits due to the diversification of their portfolio.

In the banking literature, each measure of profitability depends not only on internal-bank factors but also on the macroeconomic situation of the country where the bank is located. For the internal-bank factors, the performance determinants are the capital, the asset quality, the efficiency, the liquidity, the size, the bank's weight, the number of branches. Whereas the GDP growth, the GDP per capital and the inflation are the external-bank determinants.

The ratio of total equity over total assets (TETA) is the most used ratio to measure the capital variable. This 124 ratio reflects the bank's capacity to cover losses. An increase in this ratio can be explained by a decrease in the 125 risk exposure and thus an improvement in the capital adequacy and in bank profitability (Samad, 2004). The 126 asset quality is defined in this paper as loan loss reserves as percentage of gross loan assets (LLRGLA). It is not 127 the only indicator used in the literature to measure the asset quality 1. The LLRGLA expresses the percentage of 128 the total portfolio that has been anticipated but not charged off. For a high profitability, a bank may have lower 129 LLRGLA ratio in order to restrain their credit risk. To measure the bank's efficiency determinant, the majority 130 of studies employs the cost over income ratio (COST) or the overheads over total assets ratio (OVTA). In our 131 empirical work, we use the proxy COST as a measure of the efficiency. We thus expected a negative relationship 132 between the COST and the indicators of performance (Kosmidou et al., 2006). For the measure of bank liquidity, 133 there are several indicators. Among the most wide-spread indicators, we find net loans over total assets ratio 134 (NLTA) and net loans over deposits and short-run funding ratio (NLDF). These liquidity ratios tend to be higher 135 for highprofitability bank due to the increase in interest income. The NLTA will be our proxy to measure the 136 bank liquidity. The bank size is presented by total assets. ??erger et al. (1987) and Shaffer (1985) assumed 137 that size may positively affect the company performance. Therefore, in this study, we consider that there is a 138 positive relationship between bank size and accounting performance. To examine the variables influencing the 139 performance of banks, we try to evaluate the effects of the weight of each bank assets in total assets of Saudi 140 banks and also the effects of the number of branches on the profitability ratios. According to Delis et al., 2009, 141 andChirwa, 2003, we expected a positive sign for these variables. 142

Concerning the external variables or the macroeconomic situation that can be affected the accounting Performance, we introduce the GDP growth (gwth), the GDP per capital (RGDPC) and the inflation (INF). For the two first indicators, we expected a positive relationship with the performance ratios if they have an effect (Wang, 2009;Beck et al., 2008 and Tang, 2006). In contrast, it is hypothesized in our study that inflation affects profitability proxies negatively, according to Pasiouras and Kosmidou (2007).

The definitions, the measures and the sources of variables used in descriptive and regression analysis are presented in Appendix A.

150 IV.

151 6 DATA DESCRIPTION AND METHODOLOGY

The dataset on profitability ratios, bank's characteristics and macroeconomic variables consists of 12 Saudi banks in the period 2005-2011. Our sample of banks includes 9 commercial banks and 3 Islamic banks. Appendix B lists the Saudi banks in our sample.

Table 1 presented below describes the minimum, maximum, mean and standard deviation values for all dependent and internal explanatory variables for both commercial and Islamic banks.

Our study is elaborate on annual data covering period 1989-2011 for a heterogeneous panel of 38 developed and developing countries. The choice of countries retained in our work was founded on criterion of data availability

159 for variables in definite period. The table suggest that there are differences between both groups of banks, but it

is not important. Indeed, the statistics suggest that the commercial banks had higher profitability ratios (ROA, 160 ROE, PBTA), lower efficiency ratios (COST, OVTA), and higher size (ASSETS) and weights (WGH) ratios with 161 a lower levels volatilities measured by the standard deviation than the Islamic banks. Contrariwise, the others 162 proxies of bank characteristics (quality, capital and liquidity ratios and number of branches) are at mean higher 163 in Islamic bank than in commercial bank, but they had higher levels of volatilities. 164

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To check whether these differences are significant, we perform the test of mean equality for each variable in each 166 group of banks. The results are supported in the table 2 (see below). 167

In comparing the profitability ratios for commercial and Islamic banks, we remark that there are a significant 168 difference only in the ratio ROE but the differences of means for ROA and PBTA are not significant. Commercial 169 banks tend to have more net profit after taxes (as percent of shareholders' equity) than Islamic banks. This result 170 indicates that Saudi commercial banks operate perfectly its shareholders' funds than Saudi Islamic banks. The 171 significant difference in the mean of ROE and the non-significant difference in the mean of ROA and PBTA can 172 be observed in the figures that describe the evolution of profitability ratios in the time. These figures show that 173 the difference in the mean of ROE ratio between Saudi commercial and Islamic banks is very higher compared 174 to ROA and PBTA ratios. When the quality ratios are compared, the test equality of mean shows that there is 175 no difference between commercial and Islamic banks. This result implies that the two groups of banks have the 176 same quality of the loan portfolio. 177

Another significant difference exists when comparing the capital adequacy. Indeed, the ratio of total equity 178 over total assets is significantly higher in Islamic banks than in commercial banks. This implies that the Islamic 179 banks had a better ability to withstand losses than the commercial banks. Concerning the efficiency ratios, we 180 observe a significant difference in the cost over income (COST) ratio, but no difference in the ratio overheads 181 to total assets (OVTA). Commercial banks have a lower levels of cost to income than Islamic banks conducting 182 to conclude that commercial banks are more efficient than Islamic banks. This results can be explained as 183 the commercial banks have a higher lending margins than Islamic banks. It also can be explained by high net 184 income from associates or volatile trading income in commercial banks. When we test the equality of mean 185 for the liquidity ratios, the two ratios that are net loans to total assets and net loans over deposits and short 186 term funding are significantly different between commercial banks and Islamic banks. These ratios suggest that 187 commercial banks are more liquid that Islamic banks. Generally, the liquidity ratios tend to be higher for the 188 high performance of banks. 189

The test of size ratio shows that the mean of total assets is significant different between the two groups of banks. 190 Commercial banks have a bigger size than Islamic banks. About the weights ratios, we find that commercial 191 192 banks are more weighted than Islamic banks. Finally, the number of branches in Islamic banks is significantly very important than in commercial banks. 193 V.

194

SPECIFICATION OF MODEL 8 195

In order to examine the determinants of Saudi commercial and Islamic banks' profitability, we present the 196 following model: = +, +, +, +, +, +, +, +, +, +, +, +, (2)197

Where perf i,t is the profitability ratios including the ROA, ROE or PBTA proxy, llrgl i,t is the quality proxy, 198 teta i,t is the capital adequacy proxy, nlta i,t is the liquidity proxy, assets i,t is the size proxy, cost i,t is the 199 efficiency proxy, wgh i,t is the weight variable, branch i,t is the number of branches, gwth i,t is the real GDP 200 growth rate, rgdpc i,t is the real GDP per capital, inf i,t is the inflation rate, i,t is the disturbance term, i=1,2,...,N201 is the bank indicator and t=2005,...,2011 is the time indicator. 202

To check for potential multicollinearity between the variables, we perform a correlation analysis for each group 203 of banks (see Appendix C). Most explanatory variables are not highly and significantly correlated except for 204 the proxy of size, cost, weights and branch variables, particularly in Islamic banks. In order to improve the 205 estimations of our model, we remove the assets proxy because it had a very important correlation with the most 206 explanatory variables and we will introduce the cost, weights and branch variables in separated models. 207

Thus, the model that will be estimated is: = +, +, +, +, +, +, +, +, +, +, (3)208

The profitability model (equation 3) will be estimated using the Prais-Winsten method for each group of 209 banks. Assuming that the disturbances are heteroskedastic and contemporaneously correlated across panels, this 210 technique presents panel-corrected standard error estimates for linear panel models. 211

VI. 9 212

RESULTS AND DISCUSSIONS 10213

In this section, we present and analyze the regression results of equation (3) using Prais-Winsten method for 214 Saudi bank sample including 9 commercial banks and 3 Islamic banks over the period 2005-2011. To take into 215 account the multicollinearity problem, several specifications of equation (3) were estimated for each group of 216 banks. The first includes the weights variable (denoted I). The second contains the number of branches (denoted 217

II). The third introduces the cost proxy (denoted III). The four takes in the macroeconomic variables (denoted
IV). Tables 3 through 5 detail the estimated coefficients of the panel regression respectively for ROA, ROE et
net profit before taxes.

In examining the effect of Loan loss reserves over gross loan (llrgl) on profitability measures, we remark a statistically significant negative relationship between llrgl, as a measure of asset quality and ROA, ROE or PBTA, particularly in Islamic banks. This indicates that high asset quality ratio reduces profitability measures of Islamic banks. In the case of commercial banks, the llrgl also has a negative and significant effect on the ROE (Table 4, specifications II and IV) but it has no effect on ROA and PBTA. This implies that asset quality is an important determinant for the profitability of Islamic banks.

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Volume XIV Issue I Version I Year () Next, the total equity over total assets (teta), as a measures of capital 228 adequacy, has a statistically significant positive effect on ROA, ROE and profit before tax for commercial banks 229 except in specifications I and II when ROE had been choosing as measures of profitability (Table 4). For 230 Islamic banks, the capital measure has a positive and significant effect on ROA, ROE and profit before tax when 231 macroeconomic variables were not controlling, implying that high capital ratios increases profitability ratios. 232 In introducing these control variables, we find a statistically significant inverse relationship between the equity 233 variable and ROE (Table 4, specification IV). This negative relationship also is verified when including cost to 234 income ratio (Table 4, specification III). We thus can conclude that capital adequacy is a major performance 235 Determinants in both groups of banks. In analyzing the effects of macroeconomic variables used as control 236 variables to isolate the impacts of bank characteristics variables, we find that the effects of GDP growth (gwth) 237 and real GDP per capital (rgdpc) on ROA, ROE and PBTA are all statistically insignificant in both groups of 238 banks (All tables, specification IV). However, the inflation variable has a negative and statistically relationship 239 with the ROA, ROE and profit before tax only in commercial bank indicating that a high rate of inflation tend 240 to decrease the performance of banks.D 241

At 5% level of significance, the coefficients of net loans over total assets (nlta) are statistically insignificant 242 across all specifications of Islamic banks profitability measures. For commercial banks group, these coefficients 243 however are negative and significant in the ROA (Table 3, specification II and IV), ROE (Table 4, specification 244 II) and PBTA (Table ??, specification II). This result shows an increase in the ratio indicating a decrease in 245 liquidity declines the profitability of commercial banks due to a rise in defaulting borrowers. Generally, in 246 empirical research, the effect of liquidity ratios on banks' profitability is ambiguous. Basing on our estimation 247 results, the liquidity measures cannot be considered as major determinants of commercial and Islamic banks' 248 profitability. weight (wgh) and all performance measures in Islamic banks (All tables, specification II). This 249 250 indicates that higher bank' weight improves its performances. Contrary, in commercial banks, there is no effect of bank' weight on performance indicators, as all coefficients are statistically insignificant. Thus, the bank' weigh 251 is an important determinant of Islamic bank's performance. Same Conclusion Were finding when the coefficient 252 of number of branches (branch) is estimated. Indeed, number of branches has a positive and significant effect on 253 the performance measures only in Islamic banks (All tables, specification III). The number of branches appears 254 to be a crucial determinants of performance in Islamic banks. 255

²⁵⁶ 12 Determinants of

The cost over income (cost) is our final bank characteristics variable that was estimated. Whatever the type of banks, the cost over income as a proxy of bank efficiency has a important positive and significant effect on the all performance measures (All tables, specification III). This implies that high cost to income ratio reduces the efficiency of banks and thus decreases the bank's performances. The efficiency can be considered as an important determinant of bank's performance.

²⁶² **13** VII.

263 14 CONCLUSION

The number of studies that have addressed the issue of determinants of bank performance is very important, 264 but their results are not consensual. In this study, we tried to distinguish the determinants of performance in 265 Saudi commercial and Islamic banks. We have used a data for 12 Saudi banks including 9 commercial banks and 266 267 3 Islamic banks over the period 2005-2011. The estimation technique used in this study is the Prais-Winsten 268 method. This technique is employed to ensure that the linear regression is with panel-corrected standard errors. 269 The estimation results show that there are no a very important and significant differences between conventional 270 banks and Islamic banks in the context of Saudi Arabia for all variables except Bank cost. This finding is consistent with Unal et al (2007) findings. 271

Performing a comparative study, the empirical results found that efficiency measured by cost to income, capital measured by total equity over total assets, and inflation rate were the most variables affecting the Saudi commercial banks' performance measured by return on assets, return on equity and profit after taxes. Indeed, efficiency, capital and inflation variables could have a negative relationship with banks' performance.

However, Saudi Islamic banks' performance depends heavily on asset quality measured by loan loss reserves 276 over gross loan, capital adequacy, efficiency, bank' weigh variable measured by assets of each bank over total 277 Saudi banks assets and number of branches. These variables were the most determinants that can affect ROA, 278 ROE and profit before taxes. Asset quality has a negative effect on Islamic banks' performance. This implies 279 that the higher the loan loss reserves over gross loan ratio the poorer will be the quality of the loan portfolio. 280 This concluding is consistent and intuitive with previous works. A high level of capital ratio leads to more return 281 on assets, return on equity and particularly profit before taxes. This finding implies that larger equity over 282 total assets ratio signals decline in risk exposure and thus increased ability of Islamic banks to withstand losses. 283 Therefore, it can improve the performance of Islamic bank. This result is consistent with the works of Kosmidou, 284 Tanna, and Pasiouras (2006), Pasiouras and Kosmidou (2007), Athanasoglou, Brissimis and Delis (2008) and 285 Heffernan and Fu (2008). In addition, costto income ratio measuring efficiency tend to have a big impact on 286 all proxies of Islamic banks' performance. As such, high cost ratio leading to decrease of efficiency substantially 287 reduces Islamic banks' performance Kosmidou, 2007 and Olson and Zoubi, 2008). While bank weight and number of 288 branches variables were the most variables affect the performance measured by ROA, ROE and net profit margin. 289 For Instance, weight and number of branches could have a positive impact on banks' performance. In further 290 research, if number of banks increased, we will have more accurate results for evaluating banks' performance. 291

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1

Figure 1: Figure 1 :

1

Year Volume XIV Issue I Version I ()

[Note: D]

Figure 2: Table 1 :

					Year Volume XIV Issue I Version I () D
Ratios	T Test equality	Islamic	Difference 0.15	t-stat	Global
Profitability	of mean	banks 2.43	8.91*** 0.03	$0.28 \ 2.88$	Journal of
ROA ROE	Commercial	11.47 0.24	-0.40 -25.10***	0.39 - 1.08	Manage-
PBTA Quality	banks 2.58	3.40 38.20	-18.62***	-7.03	ment and
llrgl Capital teta	$20.38 \ 0.26 \ 3.00$	53.03 2e-04	-4.34e-06	-3.88 -	Business
Efficiency cost	13.10 34.41	$65.62 \ 93.23$	-9.55*** -	1.63 - 5.16	Research
ovta Liquidity	1.5e-04 56.07		24.77^{***}	-6.88	
nlta nldf	68.46				
Size					
assets	1e + 08	6.3e + 07	$4.5e + 07^{***}$	2.67	
Wgh	9.33	5.34	3.99^{***}	3.02	
Branch	89.78	224.37	-134.59***	-4.23	

Figure 3: Table 2 :

 $^{^{1}}$ There are also loan loss provisions over net interest revenue, loan loss reserves over impaired loans, impaired loans over gross loans, net charge-off over average gross loans, and net charge-off over net income before loan loss provision.

 $^{^2}$ © 2014 Global Journals Inc. (US) 3 © 2014 Global Journals Inc. (US) bank groups are different.

3

		Commercial banks				Islamic banks		
Variables Ratios	Ι	II	III	IV	Ι	II	III	IV
llrgl	-0.233	-0.351	-0.137	-0.254	-0.289 ***	-0.092	-0.583 ***	-0.553 ***
teta	(-0.64) 0.348 ***	(-1.25) 0.314 ***	(-0.80) 0.385 ***	(-1.46) 0.367 ***	(-2.67) 0.048 ***	(-0.60) 0.059 ***	(-4.90) -0.004	(-3.74) -0.003
nlta	(3.19) -0.086	(2.87) -0.137 ***	(6.25) -0.024	(6.81) -0.051 **	(8.26) 0.011	(8.27) 0.044	(-0.35) -0.000	(-0.37) 0.027
wgh	(-1.56) 0.046	(-2.61)	(-0.87)	(-2.04)	(0.61) 0.456 ***	(0.97)	(-0.01)	(0.95)
	(0.81)				(4.54)			
branch		-0.000				0.013 ***		
		(-0.10)				(3.78)		
$\cos t$			-0.123 ***	-0.091 ***			-0.093 ***	-0.093 ***
			(-6.16)	(-4.73)			(-6.04)	(-5.80)
Macro								
gwth				0.081				-0.038
				(1.11)				(-0.51)
int				-0.136 *				0.051
redna				(-1.87)				(0.56)
rgupe				(0.87)				(1.50)
Constant	3.379	7.419 **	4.220 **	3.148	-1.415	-4.362	9.186 ***	2.292
	(0.83)	(

Figure 4: Table 3 :

 $\mathbf{4}$

Commercial banks Variables I II Ratios llrgl -2.290 -2.971 * (-0.99) (-1.76) teta 0.840 0.578 (1.34) (1.06) nlta 0.840 (1.34) (1

(1.45) branch

-

0.006

0.31)

 cost

Figure 5: Table 4 :

	Macro gwth				0.823 (1 49)		
Year Volume XIV					(1.13)		
Issue I Ver- sion I							
() D	Variable	εI	Commerc	ial banks II III	IV	Ι	II Islamic banks III
Global Jour- nal of Man- age- ment and Busi- ness Re- search	Ratios llrgl teta nlta wgh branch cost Macro gwth inf rgdpc	$\begin{array}{c} -0.019\\ (-\\ 0.55)\\ 0.033\\ ***\\ (3.25)\\ -0.008\\ (-\\ 1.45)\\ 0.005\\ (1.03)\end{array}$	-0.030 (-1.14) 0.029 *** (2.80) -0.013 *** (-2.63) 0.000 (0.16)	-0.009 (-0.55) 0.037 *** (6.92) -0.002 (-0.58) -0.011 *** (-6.26)	$\begin{array}{c} -0.022 & (-\\ 1.33) & 0.035 \\ *** & (7.20) \\ -0.004 & * \\ (-1.85) \\ -0.008 & *** \\ (-4.80) \\ 0.006 \\ (0.98) \\ -0.014 \\ (-2.12) \\ ** & 0.000 \end{array}$	$\begin{array}{c} -0.026 \\ ** \\ (-2.52) \\ 0.004 \\ *** \\ (8.16) \\ 0.001 \\ (0.33) \\ 0.044 \\ *** \\ (5.13) \end{array}$	-0.009 (-0.59) 0.005 *** (8.02)
	Constant 0.265		0.678 **	0.315 *	(0.85) 0.262	-0.110	-0.388
	Wald	(0.68) 12.80 **	(2.07) 41.40 ***	(1.72) 84.43 ***	(1.14) 97.16 ***	(-0.89) 110.69 ***	(-1.35) 101.09 ***
	R 2 N	$0.50 \\ 54$	$\begin{array}{c} 0.65 \\ 43 \end{array}$	$0.85 \\ 54$	$0.85 \\ 54$	$\begin{array}{c} 0.71 \\ 17 \end{array}$	0.79 13

Figure 6:

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