Influencing Factors of Profitability on the Banking Industry : A case study of GCC countries.

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Abstract

The purpose of this study is to examine, evaluation and to see the impact of factors on profitability on banking industry and major differences of the performance in case of profitability of the banking industry (Islamic bank and the conventional bank) between bank-specific and macro-economic characteristics by using data of top twenty six Islamic banks and forty six conventional banks of GCC countries of 2014. In This study, I use Least Square (OLS) method to investigate the impact of assets, loans, equity, deposits, economic growth, inflation and market capitalization on major profitability indicators i.e., return on asset (ROA), and return on equity (ROE). Required data is collected from bank scope database. The empirical results have found strong evidence that only internal factors have strong influence on the profitability on banking sector whereas external factors have no influence on the profitability. In spite of time constrain, I tried at my best level to find out current situation of the profitability of the top selected Islamic and conventional banks of the six countries of the GCC that will helps the readers definitely.

Key words: Islamic Bank, Conventional Bank, Factors, Profitability, OLS, and GCC countries.

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1. Introduction

1.1 Background of the study

GCC that consist of the many conventional and Islamic banks that plays an important role in the GDP. Although these banks still play remarkable role in economic growth of the country, there are still problems on the previous research on the performance analysis of the banking industry especially Islamic bank and conventional banks that should be improved. I shall try at my best level to draw the conclusion of the problems. Whereas, my purpose is to find out and see the impact of different factors on profitability and the situation of the profit between the Islamic bank and conventional bank of the GCC countries. I want to see the result on the basis of the three models firstly, general model, secondly, addition of the variables with the general model and thirdly, dummy variable with the existing model.

All GCC countries are large oil exporters with fixed exchange rate regimes which expose them to the vagaries of international oil prices. The similarities in economic structure imply common sources of strengths and vulnerabilities of their financial systems. Al Hassan (2010) said their financial system has vulnerability. This vulnerability place negative impact on the banking industry whereas with stable economy places great and important role in the banking sector of the GCC countries. It goes without saying that more stable economy the more positive the banking industry and higher performance of the bank.

Zeitun R. (2012) find, the banking sector in the GCC countries is largely owned by locals due to entry barriers and licensing restrictions for foreign ownership. The financial sectors have the important role on the overall performance of the country. Zeitun said, the financial systems in the GCC countries are generally dominated by the banking sector, while, the non-bank financial institutions have limited presence in the GCC countries. Among the financial institution, banking sector plays a main role in financing economic activities. Furthermore, GCC countries have two banking systems; the conventional banking system and the Islamic banking system, which operates according to Islamic law which are based on the Quran and the Sunnah. On the other hand conventional bank function on the basis of the man made laws.

Similar to their conventional counterparts, Islamic banks function as an intermediary to channel funds from the saver sector to the deficit sector to promote activities in the economy. Mohd. et al. (2013) implies that, the difference is that the financial instruments are interest free and therefore are consistent with the Shari'ah Laws. Conventional banks focusing on short-term and personal loans make small contributions to the potential of economic activities. Islamic banks, on the other hand, help to promote real economic activities into PLS and different structural system.

1.2 Objective of the study

The objective of the study is to see the impact of the influencing factors on profitability and whether the differences of profitability of Islamic bank and the conventional bank in the GCC countries.

1.3 Methodology of the study

For the purpose of the evaluating and measuring the profitability of the six GCC countries, I use cross-sectional data and 72 observations combining 26 Islamic banks and 46 conventional banks for the year 2014. At first i collect many observation but due to unavailability of data i have to dropped many observations. By using bank-scope I collect required data on the specific variables and estimate all variables by using OLS method in different regression models.

1.4 Background of the GCC

The Gulf Cooperation council (GCC) consists of six countries located in the Middle East: Saudi Arabia, Kuwait, United Arab Emirates, Qatar, Oman and Bahrain. The GCC was founded in 1981 with the objective of coordinating policies of various political, economic, and social matters among its member states to have similar regulations. The GCC countries are independent governments with independent currencies. The total population of the GCC region is estimated to be approximately 34 million, which gives it third the population of the Arab world. The main religion is Islam. The GCC is wealthy in the natural resource oil: an important commodity around the world. For many of the GCC countries, oil was discovered in the 1940's in the aftermath of World War II. Having the world's largest oil reserves, the GCC depends heavily on oil exports.

This study analyses the profitability of Islamic and conventional banking in the Gulf Cooperation Council (GCC) countries for the year 2014. The GCC has been chosen as a focal point for the study since there are substantial revenues from oil trade. Moreover, the study investigates whether internal or external bank characteristics may explain the difference in profitability between the two types of banking. In addition, a regression analysis is applied on a sample of banks to test the influence of these variables on bank performance. Furthermore, results indicate that conventional banks in the GCC have better asset quality compared to Islamic banks. However, Islamic banks are better capitalised. Empirical results also suggest that interest-free lending in Islamic banking advocate profitability. Finally, total expenses in conventional banking are high which affects profitability. The reaming parts of the study, literature review, model and hypothesis, data and result, and conclusion.

2. Literature review

Mentioned by Gul, S. et al. (2011), The Banking sector acts as the life blood of modern trade and commerce to provide them with a major source of finance. This increasing phenomenon of globalization has made the concept of efficiency more important both for the non-financial and financial institutions and banks are the part of them. Banks largely depends on competitive marketing strategy that determines their success and growth. The modalities of the banking operation have changed a lot in the new millennium compared to the way they used to be in the years bygone. The function of this banking operations to mention by Islam, M. M. (2003) a well developed efficient banking sector is an important prerequisite for saving and investment decisions for rapid economic growth. It is the system by which a country's most profitable and efficient projects are systematically and continuously funded. A prominent line of research stresses the role of the financial institutions in economic growth.

Iqbal and Molyneux, (2005). Early banking in the GCC region experienced a lot of foreign ownership mostly by a bank named British Bank in the Middle East. This bank had branches across all six GCC countries. Other foreign banks were also popular as there were large revenues from oil trade. Local banks were not common as there was not sufficient experience. However, governments later adopted central banking systems to eliminate foreign involvement. Today, the Saudi banking system allows a maximum of forty percent foreign ownership and the other sixty percent must be local ownership. In other GCC countries however, foreign ownership is still permitted with no requirement of local ownership, but they must abide to the central banking rules and regulations.

Louati et al. (2015), Smaoui et al. (2011), Al-Hassan et al, (2010), Zeitum (2012) and (Al-Hassan et al. (2010) said the impact of the internal factors like bank's size, He found that liquidity funds deposited into current accounts, total capital and reserves, and the percentage of profit-sharing between banks, depositors and capital adequacy influence on the performance of the bank. They also mention competitiveness of the both bank and the religious principles of the Islamic bank influence the performance of the bank. Whereas, Zeitum (2012) said operational efficiency of the bank also influences the portability of the bank and According to the agency theory, ownership structure could be related to bank's profitability. They found that foreign-owned banks were characterized by higher profitability followed by private counterparts on the other hand; Banks owned by government were found to be the lowest profitable. Some studies show a negative relationship between capitalization and banks' profitability, it means that equity and bank financing acts as substitutes rather than complements. Mohd et al. (2013) said higher leverage and large loans to asset ratios, lead to higher profitability. He also reports that foreign-owned banks are more profitable that the domestic one. There is also evidence that taxation impacts negatively bank profitability. Performance of the bank is not only depending on the internal factors it also depend on the external factors.

Performance of the banking industry is also characterised by the macro-economic factors. According to the Smaoui et al. (2011), implies that, in competitive market, Islamic

Banks earned more than those which operate in a monopolistic market. Furthermore, interest rates, inflation and size have significant positive impact on the profits of both conventional and Islamic Banks.

Conventional bank that is fully manmade principles whereas the entire inventor gets the assurance of getting predetermined rate of the interest and getting back of the invested money. It is operated on the basis of the maximising profit without considering the welfare of the people of the society. in case of default , it impose penalty on client.

. Islamic banking literature is limited but research on commercial banks profitability will be applicable. In general, Islamic banking operations are characterised by a high degree of financial risk since the interest factor is absent. Whereas, Islamic banks function on the basis of profit and loss sharing (PLS), so if the banks undertake risk then investors share part of the risk.

According to the Al-Kassim, (2005), Islamic Banks combine commercial banking activities and investment banking operations in order to generate acceptable rates of return that is on the basis of the benchmark for depositors but in compliance with Islamic rules and principles. Unlike conventional banks, where money is considered as a commodity that can be bought and sold, Islamic Banks treat money as a mean to facilitate transactions for trading purpose but sharing with the client that creates real value in the economy.

From the analysis Johnes, J. (2009), Found that Islamic bank is less cost efficient but more revenue and profit efficient then the counterpart conventional banks because the structure and the planning of the Islamic bank is totally different from the conational bank. Islamic banking is the large features of the financial sector mainly in the developing countries, and financial sector and growth are important for economic deployment and stability.

We can easily differentiate Islamic bank and conventional bank firstly, on the basis of the product structure secondly; they run their function on the basis of the Shariah rules that means Quran and Sunnah. Zeitun, R. (2012) realize that, The product structure in Islamic banks is considered as asset backed instrument financing, while it is not in Conventional bank, which may affect Islamic bank performance. For example, Islamic banks are not exposed to some types of assets that are considered risky and experienced losses by Conventional bank, such as financial derivatives. PLS principle in Islamic financing could be one of the reasons to why Islamic banks are protected and participates in the stability of a bank's profit. Islamic banks invest their funds jointly with customer through different methods of finance such as; Musharaka, Mudarabahi, and Murabahah

3. Model

3.1. Data

A cross-sectional data relating to the banks in (GCC) countries were employed in these study 72 observations combining 26 Islamic banks and 46 conventional banks for the year 2014 that derived from the Bankscope database. The major items of interest are: bank specific factors, macro factors and use dummy to see whether differences in terms profitability of the Islamic bank or conventional bank

Observations	*All banks*	*Islamic bank*	*Conventional bank*
2014	72	26	46

3.2 sample

Total observations are 72, Out of the 72 observations 26 for the Islamic banks and 46 for the conventional banks for the year 2014. Due to the data problems i need to remove many banks from the observations.

3.3. Variables used in the study

In the banking literature, there are many profitability ratios that have been used by researchers in measuring bank performance. Olson, et al. (2011) and Iqbal et al. (2005) used ROE and ROA as a measurement of the bank profitability whereas, Houcem Smaoui et al. (2011) and Alkassim, F. A. (2005). Uses ROE, ROA and NIM as dependent variables for profitability and Efficiency: Cost to Income ratio (COSR), Asset Quality: Loan loss reserves to Gross loans (LLR), Capital: Equity to Asset ratio (EA), Liquidity: Net Loans/Total Assets (NLA), GDP growth, Inflation as a independent variables. and Total Assets (bank size), Total Equity to Total Assets, Total Loans to Total Assets, Deposits to Total Assets, Total Expenses to Total Assets and Non-Interest Expense to Total Expense as a independent variables. Finally, Gul S. and et al. (2011) Mention the factors considered for analysis include ROA, ROE, ROCE and NIM as dependent variables which each examine separately with same explanatory variables i.e., size, capital, deposits, loan, gdp, inf and MC. Whereas, Zeitun (2010) said The external determinants are the macroeconomic variables (such as interest rate, inflation, GDP, money supply and exchange rate) that affect the whole economy and considered as important determinants of performance.

In my study I use ROA and ROE as explained variables as a proxy of the bank performance on the other hand bank size, capital adequacy, and liquidity as explanatory variables of the bank specific factors and GDP and Inflation as a macro factors for running the models and see the impact of the explanatory variables on the explained variables.

3.3.1 Dependent variables

Return on Assets (ROA): ROA is the ratio of a bank's net after-tax income divided by its total assets. It measures how efficiently the management of the bank has been able to convert the bank's or institution's assets into profits.

Return on Equity (ROE): ROE is the ratio of a bank's net after-tax income divided by its total equity capital. It measures how effectively the management of the bank has been able to turn shareholders' equity into net profit.

3.3.2 Independent variables

Bank specific factors (Internal factors) -

Bank size: Total assets; the size of the bank indicates how much asset the bank has. The assets of the bank such as first, physical assets (building, land, furniture, and equipment), second, loans which is the primary source of the revenue of the bank, third, reserves indicates which bank uses for the daily transaction, and fourth investment securities**.** Hassan (2010) said, the asset quality of GCC banks has improved significantly over the past five years. The ratio of nonperforming loans (NPLs) to total loans has been on a declining trend since 2003. Whereas, Zeitun, R. (2012) said, provided evidence from Greek. They showed that banks with larger assets are more profitable but found that in his studied bank size also has certain limit on the profitability of the bank.

Capital adequacy: Equity to Asset ratio (EA); Equity to asset ratio (EA) measures the capital adequacy of the bank. It signals the overall shock absorbing capacity of a bank for potential loan asset losses. The higher the EA ratio, the stronger is the ability of the bank to withstand asset losses. Additionally, the greater the EA ratio, the lower is the need for external funding, hence the higher the profitability of the bank.

Liquidity: Net Loans/Total Assets (NLA); NLA is a liquidity ratio measuring the portion of the bank's assets tied up in loans. Higher NLA ratios could reduce the liquidity of the bank and increase the number of defaulting borrowers. However, higher NLA ratios may be indicative of better bank performance because of increases in interest income. Thus, its effect on bank performance is ambiguous. Zeitun, R. (2012). Suggested that there is a positive relationship between liquidity and profitability of the bank. Nevertheless, some studies illustrate that smaller amount of funds put in liquid investments can result in higher profitability.

Macro economic factors (External factors)-

GDP growth; Higher real GDP growth rates could stimulate the higher demand for bank loans. Therefore, a positive association is expected between real GDP growth and bank profitability. Some studies show that rapid economic growth increase profitability for a large number of countries. Technically speaking, GDP captures upswings and downswings

manifesting in the business cycles. Consequently, movements in general activity level are expected to generate direct impacts on profitability of banks.

Inflation; The importance of inflation on the performance of banks primarily due to the inflation on the sources and users of banks' financial resources. In particular, inflation affects companies' pricing behaviour. For instance, if companies expect general inflation to be higher in the future, they may believe that they can increase their prices without suffering a drop in demand for their output. In this scenario, upon the condition that expected inflation will be equal to actual inflation, there will be no decrease in business activities and no negative effect on banks' performance.

Hypothesis

In order to test hypotheses, I use five independent variables, namely bank size (total assets), capital adequacy, liquidity, efficiency, and inflation and gdp. The dependant variables are bank profitability, proxies by return on equity (ROE) and return on assets (ROA).

Total asset (bank size)

H1**:** *bank size is positively related to profitability.*

Equity to Assets (EA) ratio is a measure of capital adequacy.

H1: *Equity to Assets ratio (EA) is positively related to profitability*

Net Loans to Assets ratio (NLA) is a measure of liquidity

H1: *Net Loan to Assets ratio (NLA) is negatively related to profitability*

High inflation rates are generally associated with high interest rates on loans

H1: *Inflation has a positive relationship with bank profitability*

Gross domestic product (GDP)

H1: GDP is positively related to profitability.

3.4 Empirical Model

This study adopts a normal regression equation, Ordinary Least Square (OLS), to examine the profitability of Islamic banks and conventional banks in the GCC countries. The study is conducted on the basis of the characteristic of bank specific factors (micro factors) and environmental factors (macro factors). There are two dependent variables – ROA and ROE that will measure the profitability of the banks and explanatory variables like, total assets (bank size), total equity to total asset, total loans to total assets, and macro factors inflation and GDP that estimate the profitability of Islamic and conventional banking. In that case i divided model into three so that i can check the robustness and use conventional bank as a dummy variable. The models are demonstrated below:

Return on asset (ROA)

Model-1: General model

This is the normal regression model by taking the bank specific characteristics (internal factors) to see the impact of the internal factors on the ROA.

$$LROAi = \alpha + \beta 1\text{LBS} + \beta 2LCA + \beta 3LLDT + \mathcal{E} \text{.....1}$$

Model -2 Model with additional variables

In addition to the existing model i want to two more macro variables namely, GDP and the inflation to see the robustness of the model under when it is ROA.

$$LROAi = \alpha + \beta 1\text{LBS} + \beta 2LCA + \beta 3LLDT + \beta 4LGDP + \beta 5LINF + \mathcal{E} \text{.....2}$$

Model -3 Dummy variables

With the existing model i want to add one additional dummy variable of the conventional bank to see the impact on the ROA. D1 = 1, ISLAMIC BANK, O Otherwise.

$$LROAi = \alpha + \beta 1\text{LBS} + \beta 2LCA + \beta 3LLDT + \beta 4LINF + \beta 5LGDP + \rho D1 + \mathcal{E} \text{ .....3}$$

Return on equity (ROE)

Model-4: General model

This is the normal regression model by taking the bank specific characteristics (internal factors) to see the impact of the internal factors on the ROE.

$$LROEi = \alpha + \beta 1\text{LBS} + \beta 2LCA + \beta 3LLDT + \mathcal{E} \text{.....4}$$

Model -5 Model with additional variables

In addition to the existing model i want to two more macro variables namely, GDP and the inflation to see the robustness of the model under when it is ROE.

$$LROEi = \alpha + \beta 1\text{LBS} + \beta 2LCA + \beta 3LLDT + \beta 4LGDP + \beta 5LINF + \mathcal{E} \text{.....5}$$

Model -6 Dummy variables

With the existing model i want to add one additional dummy variable of the conventional bank to see the impact on the ROA. D1 = 1, ISLAMIC BANK, O, Otherwise.

$$\boldsymbol{LROEi = \alpha + \beta 1 LBS + \beta 2 LCA + \beta 3 LLDT + \beta 4 LINF + \beta 5 LGDP + \rho D1 + \mathcal{E} \ldots\ldots\ldots 6}$$

Where,
ROA and ROE represent as explained variables, Return on Assets and Return on Equity. On other hand there are four explanatory variables namely, BS; represents size of the bank (total asset.), CA; represent capital adequacy (total equity over total asset), LDT; represent liquidity of the bank asset (total loan over total asset), INF; represents inflation, GDP ; represent gross domestic product. α ; represents alpha (constant), i ;cross sectional , L ; represents natural logarithm, D1; represent Islamic bank dummy , $\mathcal{E}$; represent error term

4 Data and Result

I improve on previous studies by using an extensive cross-sectional data set of 26 Islamic Banks and 46 conventional banks in GCC region for the year 2014. The data on profitability and banks' characteristics are obtained from Bank Scope database that gathers information on more than 16,000 banks worldwide; following table shows the estimation of the models by using OLS.

Table 1. ***OLS estimation***
Return on equity (ROE)

Variables	*(1)*	*(2)*	*(3)*
Constant	**-0.784290** **(0.2128)**	**-0.642631** **(0.4419)**	**-0.262311** **(0.7441)**
Bank size	**0.11768**** **(0.0325)**	**0.110584*** **(0.0734)**	**0.076794** **(0.1971)**
Capital adequacy	**-0.009032** **(0.9614)**	**-0.019622** **(0.9204)**	**-0.030550** **(0.8699)**
Liquidity	**0.557883***** **(0.0007)**	**0.554958***** **(0.0009)**	**0.515900***** **(0.0013)**
GDP	**-**	**-0.165682** **(0.7950)**	**-0.301506** **(0.6199)**
Inflation	**-**	**0.070351** **(0.8288)**	**0.299108** **(0.3506)**
Dummy Islamic bank	**-**	**-**	**-0.188351***** **(0.0058)**
R^2	**0.288202**	**0.289006**	**0.368197**
Adjusted R^2	**0.256799**	**0.235182**	**0.309877**
F value	**9.177575** **(0.000035)**	**5.365549** **(0.000337)**	**6.313371** **(0.000029)**
Number of observation	**72**	**72**	**72**

P -Values are in parenthesis
significance at the 0.1 level
**** Significance at 0.05 level***
***** Significance at 0.01 level***

Result interpretation

I begin my analysis by determining the variables that are relevant in explain the variation in the profitability (proxies ROE) for my sample. I use ordinary least square (OLS) for all the estimations. The result is reported in the table 1. Column (1) - (3) are results from cross-section regression where the variables are taken for the year 2014. On the basis of the above OLS estimation i see R square 0.368197 in the model (3) that indicates that 36.8197% variation in the ROE explained by the model that means explained variables have the changes on the variation of the ROE. In that case R square indicates model (3) is the better model than among the models. Whereas F value that significance at $p<0.01$ further indicates that explanatory variables have the significance on the explaining the variation on the ROE.

The coefficient of the bank size 0.11768 and 0.110584 in the model (1) and (2) are statistically significance at $p<0.05$ and $p<0.1$ respectively. That means, every one percent changes in the bank size ROE would increase to 11.77% and 11.06% respectively. One interesting thing is that we see the robustness between model (1) and model (2). Whereas in model (3) it becomes insignificance.

Moreover, the coefficient of the liquidity 0.557883, 0.554958 and 0.515900 in the model (1), (2) and (3) respectively are statistically significant at $P<0.01$ that means every one percent change in the liquidity ROE would increase to 55.7883%, 55.4958% and 51.59% respectively. We also see the robustness in the models.

On the other hand, the coefficient of the capital adequacy in model (1), GDP and inflation in the model (2) and (3) are not statistically significance.

In addition, in model three i use the Islamic bank dummy to check is there any difference between Islamic bank and the conventional. The coefficient of the Islamic bank dummy is -0.188351 and it is statistically significance at $p<0.01$ that means there is a differences between Islamic bank and the conventional bank influencing the profitability in the GCC countries. Dummy indicates 18.8351% less than the conventional bank in case of the profitability.

Table 2. ***OLS estimation***
Return on asset (ROA)

Variables	*(1)*	*(2)*	*(3)*
Constant	**-2.710407** **(0.0000)**	**-2.532013** **(0.0034)**	**-2.158829** **(0.0092)**
Bank size	**0.108429**** **(0.0484)**	**0.099153*** **(0.1083)**	**0.06599** **(0.2691)**
Capital adequacy	**0.978719***** **(0.0000)**	**0.964187***** **(0.0000)**	**0.953464***** **(0.0000)**
Liquidity	**0.566323***** **(0.0006)**	**0.562992***** **(0.0008)**	**0.524666***** **(0.0011)**
GDP	**-**	**-.208112** **(0.7447)**	**-0.341388** **(0.5763)**
Inflation	**-**	**-.095867** **(0.7688)**	**0.320332** **(0.3200)**
Dummy Islamic bank	**-**	**-**	**-0.184817***** **(0.0070)**
R^2	**0.317262**	**0.318540**	**0.391306**
Adjusted R^2	**0.287141**	**0.266914**	**0.335118**
F value	**10.53300** **(0.000009)**	**6.170170** **(0.000095)**	**6.964322** **(0.000010)**
Number of observation	**72**	**72**	**72**

P- Values are in the parenthesis
****significance at the 0.10 level***
*****significance at the 0.05 level***
******significance at the 0.001 level***

Result interpretation

In table -2 OLS estimation, there is a remarkable change in the significance of the coefficient of the variables. From the above estimation we see the coefficient R square 0.391306, indicates that 39.1306% variation in the ROA can be explained by the model. F values that significance at $p<0.01$ further indicates the variables are significance in explaining the variation in the ROA

The coefficient of the bank size 0.108429 and 0.099153 that statistically significance in the model (1) and (2) at $P<0.05$ and $p<0.1$, that means every one percent changes in the bank size ROA would lead to increase 10.8429% and 9.9153% respectively. In that case we see the robustness between the models. Whereas in the model (3) bank size is not significance.

Moreover, the coefficient of the capital adequacy 0.978719, 0.964187 and 0.953464 in the model (1), (2) and (3) respectively are statistically significance at $p<0.01$, that means every one percent change in the capital adequacy ROA would lead to increase 97.87%, 96.42% and 95.53% accordingly. In that case we see the robustness in among the three models.

In addition**,** the coefficient of the liquidity 0.566323, 562992 and 524466 are statistically significance at $p<0.01$, that means every one percent change in the liquidity ROA would lead to increase 56.63%, 56.30% and 52.44% in the model (1), (2) and (3) accordingly. It is further indicates that it has the robustness among the models.

On the other hand, the coefficient of the GDP and inflation are not statistically significance in the model (2) and (3).

Finally, in the model (3), I use Islamic bank dummy to see the differences of the Islamic bank and the conventional bank. The coefficient of the Islamic bank dummy is -0.184817 that is statistically significance at $p<0.01$, that means the difference of the profitability of the Islamic bank is 18.48% less than of the conventional bank.

Overall observation

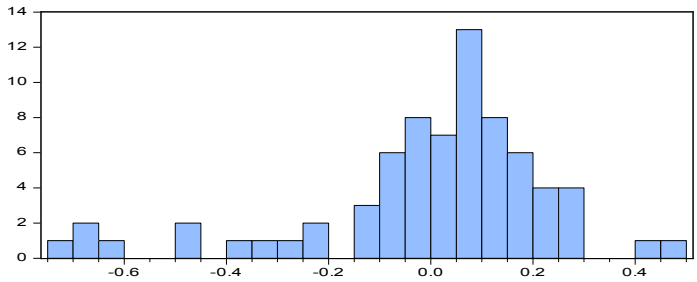
From the overall observation of the two models under the OLS estimation the second OLS estimation is the best.

Alkassim, F. A. (2005) found in his study capital adequacy in terms of the ROE is not significance but I found that it is significance in the study. Whereas, bank size and liquidity both are the significance in ROA and ROE. On the other hand, Gul, S.et al. (2011) found GDP and the Inflation is significance with the profitability but I found insignificant in my study. According to other some studies they found it also insignificant.

Diagnostic test and result interpretation
Return on equity (ROE)

Normality

Ho: Error term is normally distributed
H1: Error term is not normally distributed



The above graph shows the normality problems. After removing three outliers still i see there is a normality problem. Since Jarque- Bera is significance at the level $p<0.01$, we fail to accept null hypothesis that error term is normally distributed.

Mis-specification

Ho: No model mis-specification
H1: Model mis-specification

	Value	df	Probability
t-statistic	1.043940	64	0.3004
F-statistic	1.089811	(1, 64)	0.3004
Likelihood ratio	1.215716	1	0.2702

From the statement of the RESET test above, I see the value F is 1.089811 that is not significance at $p>0.1$ level, that means we cannot reject the null hypothesis. This indicates that there is no model misspecification.

Autocorrelation

Ho: error term is not autocorrelated
H1: error term is auticirrelated

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.146980	Prob. F(2,57)	0.8636
Obs*R-squared	0.369413	Prob. Chi-Square(2)	0.8313

From the above LM test i see F-statistics 0.146980 is not significance at p> 0.1, that means hull hypothesis not rejected that indicated that error term is not autocorrelated.

Heteroskedasticity

Ho: variance is constant
H1: variance is not constant

Heteroskedasticity Test: White

F-statistic	2.186547	Prob. F(25,46)	0.0106
Obs*R-squared	39.09836	Prob. Chi-Square(25)	0.0360
Scaled explained SS	56.04553	Prob. Chi-Square(25)	0.0004

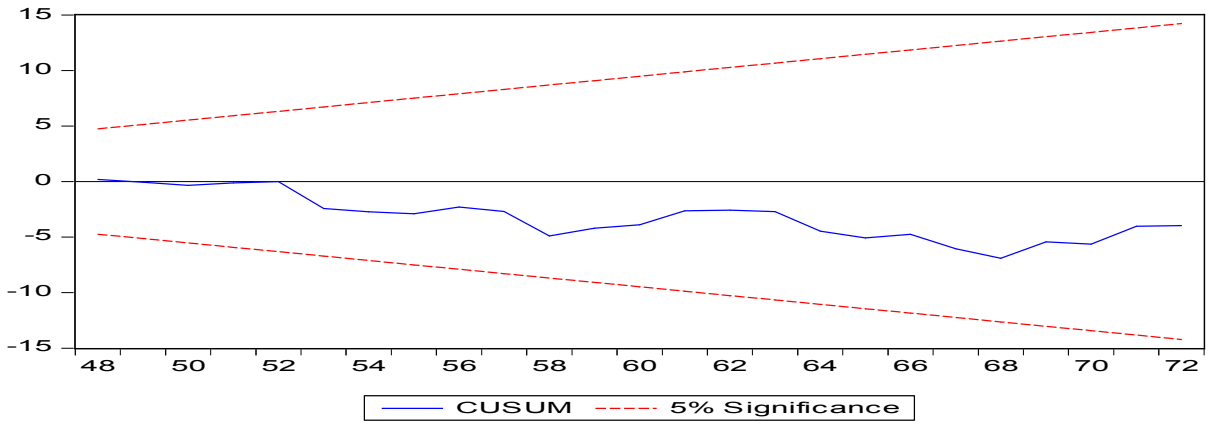
From the above white test i see Obs*R squared 39.09836 that is significance at p<0.05, that means there is a hetero problem because of rejecting the hull hypothesis. For this reason i do the following **White variance – covariance matrix as a remedies of the heteroskedasticity.**

	Before correction		After correction	
Variable	Coefficient	Std. Error	Coefficient	Std. Error
C	-0.262311	0.800159	-0.262311	1.036189
LLID	0.5159	0.15293	0.5159	0.167987
LBS	0.076794	0.058931	0.076794	0.069321
LETA	-0.03055	0.185797	-0.03055	0.302265
LGDP	-0.301506	0.605027	-0.301506	0.496101
INF	0.299108	0.318133	0.299108	0.237269
DUMMY	-0.188351	0.065988	-0.188351	0.077925

From the above table i see after doing the **White variance – covariance matrix** standard errors become the change than before.

Structural stability

Ho: no structural break
H1: structural break

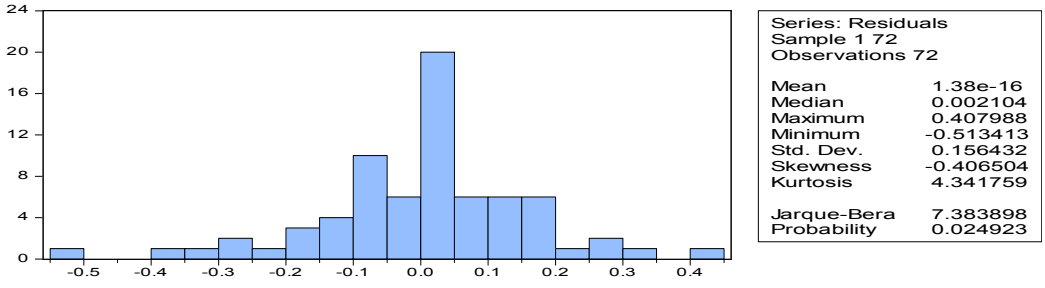


From the above structural stability (CUSUM) I see the line stay within the range, there is no structural break.

Diagnostic test and result interpretation
Return on asset (ROA)

Normality

Ho: Error term is normally distributed
H1: Error term is not normally distributed



The above graph shows the normality problems. After removing three outliers still i see there is a normality problem. Since Jarque- Bera is significance at the level $p<0.05$, we fail to accept null hypothesis that error term is normally distributed.

Mis-specification

Ho: No model mis-specification
H1: Model mis-specification

Ramsey RESET Test
Equation: UNTITLED
Specification: LROA C LLID LBS LETA LGDP INF DUMMY
Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	2.088472	64	0.0407
F-statistic	4.361716	(1, 64)	0.0407
Likelihood ratio	4.746952	1	0.0294

From the above table i see that the F-statistics value test 4.361716 that is significance at $p<0.05$, that means we can reject the null hypothesis that means model mis-speficifcation.

Autocorrelation

Ho: error term is not autocorrelated
H1: error term is auticirrelated

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.300526	Prob. F(2,63)	0.7415
Obs*R-squared	0.680424	Prob. Chi-Square(2)	0.7116

The table shows that F statistics is 0.30526 and prob. is 0.7415 that is not significance at $p>0.1$, that means we cannot reject the null hypothesis which indicates the error term is not autocorrected.

Heteroskedasticity

Ho: variance is constant
H1: variance is not constant

Heteroskedasticity Test: White

F-statistic	1.790837	Prob. F(25,46)	0.0429
Obs*R-squared	35.51255	Prob. Chi-Square(25)	0.0793
Scaled explained SS	54.52606	Prob. Chi-Square(25)	0.0006

The above white test indicates Obs*R squared is 35.51255 that is significance at p<0.1, implies that variance is not constant. I need to do test **White variance – covariance matrix** as remedies of the heteriskedasticity.

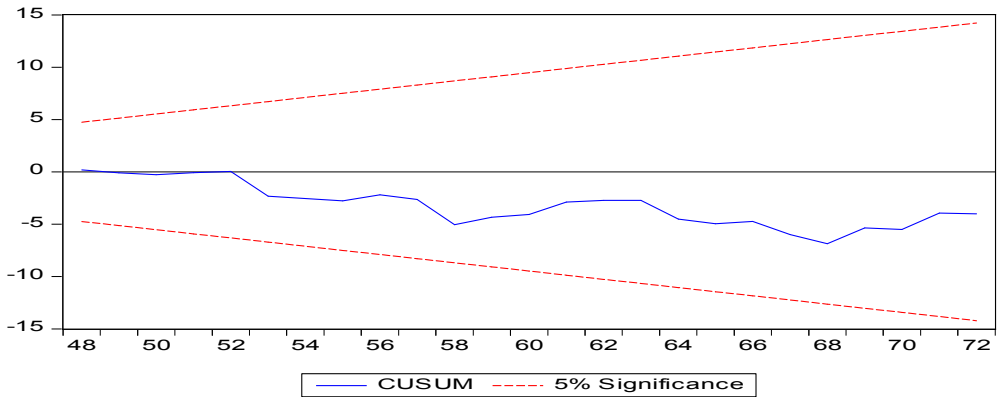
After **White variance covariance matrix** i find the following correct term of the standard error.

	Before correction		After correction	
Variable	Coefficient	Std. Error	Coefficient	Std. Error
C	-2.158829	0.803964	-2.158829	1.036088
LLID	0.524666	0.153657	0.524666	0.168437
LBS	0.065997	0.059211	0.065997	0.069134
LETA	0.953464	0.186681	0.953464	0.298299
LGDP	-0.341388	0.607904	-0.341388	0.506719
INF	0.320332	0.319646	0.320332	0.242429
DUMMY	-0.184817	0.066301	-0.184817	0.078822

From the above table i see after doing the **White variance covariance matrix** standard errors become the change.

Structural stability

Ho: there is no structural break
H1: there is structural break



From the graph we see there is no structural break because the line stays between the lone.

4.1 Findings

From the **OLS estimation** the coefficient of the two macro variables GDP and the inflation are not statistically significance that means these variables have no relation with the ROA and ROE as well. Dummy of the Islamic bank is negatively but significance related with the ROA and ROE. In the other hand, in **Diagnostic test** I found there are the problems of the normality and heteroskedasticity. In case of the normality problems I remove three outliers but there is still normality problem whereas in case of removing hetero problem I use the hetero remedies **White variance – covariance matrix to solve the problem.**

5. Conclusion

This study investigates the impact of bank-specific characteristics and macroeconomic indicators on bank's profitability focusing on the GCC's banks scenario for the year 2014. Individual bank characteristics (internal and external factors) are considered as determinants of bank profitability in GCC countries. Banks with more equity capital, Total Assets, Loans, Deposits and according to the some studies and they found that macro factors i.e., economic growth, and inflation are perceived to have more safety and such an advantage can be translated into higher profitability but in my study i found that both macro variables GDP and inflation have no relation on the profitability of the banking sectors in the GCC scenario. Result shows that all the explanatory variables have the great impact on the profitability including Islamic bank dummy that shows the significantly difference in terms of the profit between Islamic and conventional bank. The finding of the study is there have a normality and heteroskedasticity problem in the study.

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