

# The Impact of the Capital Adequacy and Cost to Income Ratio on the Financial Performance of Kuwaiti Local Banks

Mr. Majdi Hasan Abdelqader  
*International Turnkey System, Kuwait*  
*majdi.abdelqader@its.ws*

Dr. Ammar Yaser Almansour  
*Amman Arab University, Jordan*  
*a.almansour@aau.edu.jo*

Dr. Bashar Yaser Almansour  
*Middle East University, Jordan*  
*balmansour@meu.edu.jo*

**Abstract-** The aim of this study is to examine the effect of the capital adequacy ratio and the cost-to-income ratio on the financial performance of local Kuwaiti banks represented in return on assets and return on equity. The necessary data was extracted from the ten financial statements in Kuwaiti banks listed on the Kuwaiti stock market during the period between the years 2009 to 2018. To determine this, a statistical analysis model (Panel Data) was used for dependent and independent variables, and the control variables that showed that there is a positive impact of the capital adequacy ratio on each of return on assets and return on equity of local Kuwaiti banks. The results show that there is a negative impact of the cost-to-income ratio, on both return on assets and return on equity of local Kuwaiti banks.

**Keywords –** Capital adequacy ratio (CAR), Cost-to-income ratio (CIR), return on assets (ROA), Return on equity (ROE).

## I. INTRODUCTION

Banks are the most important financial institutions that have a significant impact on the growth of the country's economy through the importance of the activities that they carry out. The importance of their existence lies in their main activity of accepting the bank Deposit from clients to be employed in many forms in lending in addition to the other services, which provide in facilitating the bank transactions inside and outside each country. They also play a prominent role in the stability of monetary policy of countries through the procedure taken by the central banks of these countries.

The banking industry worldwide has been faced with deep and sizable changes over the last twenty years. Accordingly, the banks have considered the importance of performing effectively through a competitive environment while mitigating its ability to fulfill its obligations. The “capital adequacy standard” is a global standard that represents the minimum safety and security requirements. It thus represents the protective line towards the ability and efficiency of banks to monitor risks faced and the minimum level of such risks in order to make decisions that help them improve their financial performance in terms of obtaining sources of funds at the lowest possible cost and lending them for the sake of loans of low credit risk and operational costs (Altaeeb et al, 2001).

The standard of cost-to-income ratio is one of the major financial items that are particularly important in assessing the performance of banks in various aspects of the global economy. It constitutes of an important

indicator for investors as it reflects a clear view about the efficiency and operations of a bank in terms of assessing all of the operating costs and operating income and its reflection on the financial performance of banks, which measures the efficiency of these banks.

That Kuwait occupies a prominent place in the Gulf and global economy is reflected positively on the banking sector in Kuwait which enjoys a good level of strength and durability in light of the variables of global economic conditions. This has been achieved through the total precautionary measures used by the Central Bank of Kuwait and control programs for early detection of risks and their impact on financial stability. This was supported by an increased government capital spending within the framework of a fiscal policy aimed at supporting the Kuwaiti economic activity as well as maintaining an appropriate operating environment for local banks. This means that banks must continue to keep pace with global developments in the field of banking supervision and its ability to meet the requirements of the capital adequacy standard and increase its operational efficiency.

Kuwaiti banks seek to improve their financial performance and enhance their ability to continue to expand their activities so that they remain in a strong competitive position with other banks globally, especially in the Gulf region. The Central Bank of Kuwait has set the minimum capital adequacy Standard to be at least 13%, which is higher than approved by the Basel Committee (3) for Banking Control (10.5%). The problem lies in searching for the extent the Affected of Kuwaiti banks by applying this high rate to their financial performance. It also involves reducing opportunities to expand credit and investment activities due to the disruption of employing a higher percentage of the funds available in profitable investment opportunities.

Given that Kuwaiti banks monitor the cost-to-income ratio for reaching reasonable limits that may positively or negatively affect its financial performance, this study seeks to investigate the impact of capital adequacy and cost to income ratio on the financial performance in the local Kuwaiti banks, represented by both return on assets (ROA) and return on equity (ROE).

## II. LITERATURE REVIEW

Debeki (2015) analyzed as well as measured the prevailing relationship between the use of “capital adequacy ratio” as well as the profitability that was associated with “commercial erased business entities” that operated in the Palestine which were represented through the ROA, the returns on the property rights, and even the returns that were made on the shares and this was during the time frame of 2008 to 2014 in which there was the studying of the “succession of dependent variables”. Profitability was measured using the ROR on the ROA, the ROE, the EPS, and through independent variables that were effectively represented using CAR. In order to attain this objective, there was the developed of a standard model that was aimed at measuring the relationship or association between the dependent variables as well as the independent variables that were based on the equation models of linear regression. This message hit some results since some of the vital factors was that an increasing in capital adequacy led to a reduction in the “Rate of Return on the assets, the ROE, and even on the “Rate of return on the shares” that resulted in exaggeration in determination of capital adequacy and working to attain balanced needs with goals of other banks in the achievement of profitability that was represented through an increase in rates that had been fore mentioned and ensuring that there was a balance between capital adequacy requirements as well as achievement of profitability thus giving more room for investment opportunities for relevant and meaningful risks which are both acceptable and controlled for returns.

Deghain and Rishm (2007) studied the issue of capital adequacy based on the “Basel Committee III” requirements as well as the impact that it had on the commercial banks’ profitability. This was based on the empirical studies that were carried out in the Middle East between the year 2006 to the year 2015 and this was through the use of descriptive analysis that was used in not only the description but also in the analysis and the measurement of the banks’ “adequacy of capital” as well as their profitability. In essence, “capital adequacy” was therefore measured the division of the total capital on the risk of the weighted assets. After the measurement as well as the appreciation was done, the banks then measured the profitability indicators, which were associated with the financial rations, and these include the ROE, ROA, the Net profit Margins, and the interest rates. ANOVA was then used in the measurement of research relationships as well as the variables. The results emanating from the study pointed out or noted that there was indeed a negative statistical impact that prevailed between profitability and “capital adequacy” in banks in the Middle East. For example, one of the unit growths in “ratio of capital adequacy” resulted in a decrease or reduction of the profitability to approximately 0.160 and even proved the link relationship or association in the Baghdad

Ban. This was a clear proof that the validity that was associated with the “search hypothesis” was not proved based on the data that emanated from the “Bank of Baghdad”.

Shahatit and Al-Tayyib (2011) investigated the impacts of commercial banks in the application of “Capital adequacy standards” on profitability from 2000 to 2007 and this was through the use of the model of “standard economic analysis” regression model that was reliant on regression model based on the cross sectional data where it was combined with the time series. Conclusions from the study concluded that “capital adequacy rates” for the banks that operated or ran in Jordan during the study period saw the need of increasing the banks’ strategic planning in order to ensure that there was an increase in capital.

Obeidat (2008) studied the importance of different factors determining the rate of “capital adequacy” in commercial banks in Jordan and more so in the Amman Stock exchange from 2000 to 2008. This study used the approach of descriptive analytical methods where the first one relied on the past studies in covering the “theoretical sides’ in addition to yearly reports which had been given to Jordanian banks as well as the “Amman Stock Exchange”. The second one made use of the “statistical analysis method” for data that had been collected through Pearson Correlation rates as well as the “Multiple linear regression models”. Most vital findings from this study were that there existed a direct association between the rate of independent factors and capital adequacy. The study recommended that there was need to carry out more studies that were inclusive of other studies and ensure inclusion of final reports of financial statement from banks, foundations and rules on the “capital adequacy measures” that were used in increasing of financial awareness.

According to Tripe (2003) who explained that making comparisons on the ROE was one of the ways through which their performances that was relative to each of them could be measured. The “Return on Equity” or ROE looks at or based on the shareholders return on investment in the shares of a bank with other viable opportunities of investment. It was important to note that while it was capable of providing essential measures of the risks of the bank, it was also indicated that there ought to be a negative association between the “ratio of capital” of a bank to the assets and its “Return on Equity” may actually seem to be quite self-evident and may not require an empirical verification. That apart, it was also ascertained that there was a “negative relationship” between profitability and capital.

Narain, Ghosh and Sahoo (2003) gave an explanation that banks were supposed to hold their capital equal up to a certain fraction of their “total risk-weighted assets”. It is therefore prudent to note that according to Berger (1995), significant evidence was found to have a positive association or relationship and this implies that the “ratios of capital” to the assets as well as the “Returns on Equity” were known to have been positively associated. The author further argued that higher capital ratios with a reduction on the risks of bankruptcies which should ultimately reduce the costs of funds of banks. This is through a reduction of the price funds as well as the quality of the funds that were required thus leading to an enhancement of the net interest incomes of the bank and profitability.

According to Neceur (2003), a sample of ten Tunisian banks that operated from 1980 to the year 2000 as well as a panel “linear regression model”, it was indicated that there was a strong positive effect of capitalization to the ROA. This research study applied the panel data in the analysis of financial data and based on the findings of the researcher, it was found that the characteristics of the bank had an impact on profitability.

### III. RESEARCH METHODOLOGY

The study is indeed one of the analytical studies that the researcher embraced using “descriptive financial analysis” method in order to describe financial situations of selected banks and identify the extent application of “capital adequacy” and the “cost to income ration” on performance for purposes of not only analysis and financial ratios but also statistical tools which were applied with an aim of examining the effect of “independent variables” on the “dependent variables”. Panel analysis of data was applied in testing of hypotheses as well as measurement of differences as well as similarities between “sample banks” based on different features or characteristics. The “Pearson correlation coefficient” was further applied in investigating correlation between study variables according to Panel Data Analysis. In addition to the multiple regressions to further, test the hypothesis.

Relevant information was collected from financial statements of ten local banks in Kuwait from 2009-2018. The data was used in computing main “financial ratios” of chosen Kuwaiti banking institutions for the period mentioned, and in the assessment of the banks’ performances. The researchers developed then applied the “financial model” as a study instrument in analyzing data and “extent of the hypothesis” that had been raised.

### 3.1 Population and Sample

This study took a population consisted of ten banks as stipulated in annual report of the Central Bank of Kuwait on 31st of March, 2019. Banks, which contributed in this study, which equals 100% of the sample size, are as the following:

- The “Kuwait Finance House” K.S.C “KFH”
- The “Al- Ahli Bank of Kuwait K.S.C.P” “ABK”
- The “Ahli United Bank K.S.C.P” “AUB”
- The “Boubyan Bank K.S.C.P” “BB”
- “Burgan Bank Group” or “BBG”
- The Commercial Bank of Kuwait Group “CBK”
- Gulf Bank K.S.C.P “GB”
- The “Kuwait International Bank K.S.C.P” “KIB”
- The “National Bank of Kuwait Group” “NBK”
- The “Warba Bank K.S.C.P” “ WB”

### 3.2 Research Hypothesis

The proposed model of this study considers one main hypothesis as follows where there is no statistically significant effect at the level of ( $\alpha \leq 0.05$ ).

H<sub>0</sub>: There is no statistically significant impact, at level ( $\alpha \leq 0.05$ ) of capital adequacy and cost to income ratio on return on assets and return on equity with the presence of the control, variables (bank size, total equity to total assets ratio, assets to liabilities ratio, debt to equity ratio).

This leads to two sub-hypotheses as follows:

H<sub>01</sub>: There is no statistically significant impact, at level ( $\alpha \leq 0.05$ ) of capital adequacy and cost to income on return on assets.

H<sub>02</sub>: There is no statistically significant impact, at level ( $\alpha \leq 0.05$ ) of capital adequacy and cost to income ratio on Return on Equity.

## IV. EMPIRICAL RESULTS AND HYPOTHESIS TESTING

The section presents data analysis as well as study findings on simultaneous relationship between the “capital adequacy” and “cost to income” ratios on the “return on assets” and the “return on equity” for ten listed Kuwaiti banks under Kuwait Central Bank for the period from 2009-2018. The presentation in this section is divided in five major sections which are as follows: Descriptive analyses of variables for the study, Discussing the correlation analysis that depicts the strength of the relationship or association between different variables, Further analysis of the relationship or link between “Capital Adequacy Ratio, Cost Income Ratio and Return On Assets, Return On Equity ” using regression analysis with the inclusion of several control variables, more specifically discusses the outcomes of the Pooled OLS and panel data analyses that shape the main findings of this study, then additional analysis and ends with a summary.

### 4.1 The Descriptive Statistics Analysis

Table one exhibits “descriptive statistics” on each of “the variables used” in this study. Impact of the independent variables, the “capital adequacy ratios” which are measured through dividing “total capital” over the “Risk weighted assets” and impacts of the “cost to income ratio” that is measured through division of “operating expenses” over “operating income” on the dependent variables, “return on assets” that is measured through dividing the “net income” over the “total assets” and the “return on equity” whose measurement is done through division of the net income over the “total equity”. However, “control variables” used in analysis are the following: the size of bank which is measured through calculating the

“natural logarithm of total assets”, total equity to total assets, “total assets to the total liabilities” and “debt to equity ratio” whose measurement is done through dividing the “total debt over the total equity”.

To better comprehend general characteristics of this sample this table reports the minimum and maximum values besides the mean and standard deviations which consists of overall (variation over time and individuals) and within variation (within individuals over time) that is used to show from where the deviation comes from.

Table 1: Summary Statistics of the Collected Variables

	R.O.A	R.O.E	C.I.R	C.A.R	E.C.A	A.L	D.E	B.S
N	100	100	100	100	100	100	100	100
Mean	0.007338	0.060539	0.451232	0.253908	0.153109	1.27297	6.537568	15.1507
Min	-0.05391	-0.58372	0.167406	0.135	0.084095	1.092	0.235224	11.7071
Max	0.022283	0.136773	1.979866	2.0441	0.79931	4.983	10.81152	17.1270
Std.	0.010067	0.077599	0.311788	0.324761	0.120605	0.659424	1.904863	1.11025

Table one shows mean of “dependent variable” return on assets ROA was 0.00733 with a “standard deviation” of 0.01006, the lowest values was -0.0539 belongs to the Boubyan bank in the year 2009 and the highest value was .0222 for NBK bank in the year 2011, it also shows the mean of the second dependent variable return on equity ROE was 0.06053 with a “standard deviation of 0.07759”, the lowest values was -0.58372 belongs to the Boubyan bank in the year 2009 and the highest value was .013677 for AUB bank in the year 2014, it shows the mean of the independent variable capital adequacy ratio CAR was 0.25390 with “a standard deviation of” 0.32476, lowest values was .135 belongs to Burqan bank in the year 2014 and the highest value was 2.044 for Warba bank in the year 2011, it shows the mean of the second independent variable CIR was 0.45123 with “a standard deviation of 0.31178”, lowest values was .16740 belongs to the CBK bank in the year 2009 and the highest values was 1.979 for Warba bank in the year 2011.

It also shows that the mean of the control variable total equity to total assets ECA was 0.1531 with “a standard deviation” of 0.1206, lowest values was 0.08409 belongs to Warbabank in the year 2016 and the highest value was 0.79931 for the same bank in the year 2011, it also shows that the mean of the control variable assets to liabilities AL was 1.27 with “standard deviation of” 0.65942 lowest value is 1.092 belongs to Warba in the year 2016 and the highest value was 4.983 for the same bank in 2011, it shows that the mean of the control variable debt to equity ratio DE was 6.5375 with a “standard deviation of 1.9048”, lowest values was 0.23522 belongs to Warbabank in the year 2011 and the highest value was 10.8115 for the same bank in 2016. it shows that the mean of the control variable Bank Size (BS) was 15.150 with a standard deviation of 1.1102, the lowest value was 11.707 belongs to Warba bank in the year 2011 and the highest value was 17.127 for NBK bank in 2018.

All “CARs” indicated that Kuwaiti banks still operated or run above the “minimum statutory level” or rates that was approved by Central bank of Kuwait 13% to be implemented starting from the year of 2016. A typical or traditional bank in this sample had an average capital adequacy ratio of 25%. The ratio implies that Kuwaiti banks are capable or able of meeting their obligations were in satisfactory levels where the risk of failure is terminated. All CIRs indicated that Kuwaiti banks operated in average below “the 50% threshold” level as this sample had a “cost to income ratio” of on average by 45%, D.M Mathuva (2009) had recommended that costs to the “income ratio” which were high in the Kenyan banks to be lower than 50% threshold to become more effective so as to be globally competitive. The ratio implied that the banks

in Kuwaiti were keen on the management of their respective efficiency levels especially in relation to innovations that were cost cutting.

#### 4.2 Correlation Analysis between Variables

Table 2 depicts that, the “Pearson correlation coefficient” was applied in investigating the correlation that prevailed between variables, which were integrated in the model of study.

Table 2: Pearson Correlation of the Study Variables

	car	ci	debtto~y	Bs	assets~s	equity~s
Capital adequacy ratio CAR	1					
Cost to income CI	0.2936	1				
Debt to equity DE	-0.6758	-0.6225	1			
Bank size BS	-0.6496	-0.6818	0.4172	1		
Assets to liabilities AL	0.5793	0.2125	-0.6461	-0.5735	1	
Equity to assets ECA	0.4953	0.7048	-0.7744	-0.6128	0.6746	1

\*\*\*Correlation is significant at the 0.05 level (2-tailed)”

The correlation coefficients in table two have no value above 0.8, which can lead to multicollinearity problem (Judge, Hill, Griffiths, Lutkepohl, & Lee, 1988). In order to confirm that the results are free of multicollinearity problem that only affects parameter estimates for these linear variables, the variance factor (VIF) has been examined. Variables with a VIF value greater than 5.0 are considered the cause of multiple linear correlation problems (Tu, Kellet, Klerehugh, & Gilithorpe, 2005).

Table 3: The Results of VIF Analysis

Depredate variable: ROA

Variables	“VIF”	“1/VIF”
Capital adequacy ratio CAR	1.52	0.657894737
Equity to assets ECA	1.34	0.746268657
Assets to liabilities AL	1.76	0.568181818
Debt to equity DE	2.33	0.429184549
Cost to income CI	1.11	0.900900901
Bank size BS	3.07	0.325732899

a. Predictors: -Constant, “CAR, ECA, AL, DE, CIR, BS”

Table 4: The Results of VIF Analysis

Depredate variables- ROE		
Variables	VIF	1/VIF
Capital adequacy ratio CAR	1.45	0.689655172
Equity to assets		
ECA	1.66	0.602409639
Assets to liabilities		
AL	1.53	0.653594771
Debt to equity		
DE	1.78	0.561797753
Cost to income CI	1.98	0.505050505
Bank size		
BS	3.4	0.294117647

a. Predictors: (Constant), CAR, ECA, AL, DE, CI, BS

The results show that there is no problem of multiple linear correlations in all models where VIF was found less than 5.0 and thus the multiple regressions was used.

#### 4.3 Regression Analysis

Main hypothesis, HO: There is no “statistically significant impact”, at rate or level “ $\alpha \leq 0.05$ , of capital adequacy” and “cost to income ratio” on “Return on Assets” and “Return on Equity” with presence of control variables. From this main hypothesis the following two sub-hypotheses have been emerged which are as follows:

HO-1 There is no “statistically significant” effect at rates or level of “( $\alpha \leq 0.05$ ) of “capital adequacy” and “cost to income” on “Return on Assets”.

HO-2 There is no “statistically significant” effect at the level or rates of “( $\alpha \leq 0.05$ ) of capital adequacy” and “cost to income” on “Return on Equity”.

Before hypothesis testing, the least squares model assumptions should be checked so that they do not suffer from problems of self-correlation and difference in variance. For instance, Pooled OLS must not suffer from heteroscedasticity and autocorrelation problems. The tests of these problems are necessary to insure the suitability of using Pooled OLS estimation method if it is the appropriate method to use since fixed and random effects will be compared with Pooled OLS.

For the first hypothesis, And when using “Breusch-Pagan” or “Cook-Weisberg test” it appears that indeed there was a problem with difference in variance because the P-value is 0.000 which is lower than 0.05 and chi squared equals 41.67 this indicates the rejection of the “nihilistic hypothesis” that stated that “this variance is fixed” and there is no difference, this result was backed by the “Wooldridge test for autocorrelation” which prevailed in “panel data” as moral values was .0011 and this is lower than 5 % and F value was 21.97 and therefor Robust Standards Errors is needed to solve this problem. The following was analyzed to see which model is most appropriate among “Pooled OLS”, random effects, and fixed effects.

##### 4.3.1 The Pooled OLS versus Fixed Effect

The test showed that F = 4.26 with a “P Value of .000142” lower than (0.05) implied that “fixed effect model” was chosen in front of the pooled OLS.

#### 4.3.2 Pooled OLS versus Random Effect:

To select most “appropriate model” between the pooled OLS as well as the “random effect” a Breusch & Pagan test was used. The test showed that Chi squared = 0.56 and  $p = 0.45$  which is greater than (0.05) and this shows that we should accept the pooled OLS in front of the random effect.

#### 4.3.3 Random versus the Fixed Effect

The “Hausman test” shows that the P-value equals to (0.0022) and is less than (0.05), which indicates the choice of fixed effects. Finally the results will be commented on according to table 5 the fixed effects.

Table 5: Fixed Effect (ROA)

ROA	Coefficient	Standard. Error.	T	P>t	[95% Conf. Intervals]
Capital adequacy ratio CAR	0.0044224	0.0011198	3.95	0	0.0021987 0.0066461
Cost to income CI	-0.0151599	0.0064491	-2.35	0.021	-0.0279665 -0.0023534
Debt to equity DE	-0.0029205	0.0010923	-2.67	0.009	-0.0050896 -0.0007514
Bank size BS	0.0556829	0.0324357	1.72	0.089	-0.008728 0.1200938
Assets to liabilities AL	0.0116324	0.0104394	1.11	0.268	-0.0123631 0.0290982
Equity to assets ECA	0.1052561	0.0739437	1.42	0.158	-0.2520937 0.1215814
_cons	-0.0169456	0.0169437	-1	0.32	-0.0505924 0.0167012

For the second hypothesis, by using the Breusch-Pagan or the “Cook-Weisberg test”, it appeared that there is a problem with differences in variance because the P-values is 0.000 which is lower than the 0.05 and the chi squared equals 190.94 this indicates the rejection of the “Null hypothesis” that stated that variance is “fixed” and there is no difference, this result was backed by “Wooldridge test for autocorrelation in panel data” as P-values was actually 0.0001 and this is lower than 0.05 and F value was 42.487 and therefore Robust. The following was analyzed to see which model is most appropriate among random effects, “Pooled OLS”, and fixed effects.

#### 4.3.4 The Pooled OLS versus Fixed Effect

The test showed that  $F = 4.93$  with a “p Value of 0” which is lower than 0.05 implied that “fixed effect model” was chosen in front of the pooled OLS.

#### 4.3.5 Pooled OLS versus Random effect:

To select “most appropriate model” between the “pooled OLS” and the “random effect” a Breusch & Pagan test was used. The test showed that Chi squared = 0.41 and  $p = 0.5218$  which is greater than 0.05 and this shows that we should accept the pooled OLS in front of the random effect.

#### 4.3.6 Random Effect versus the fixed effect

The “Hausman test” shows that the P-value equals to (0.0001) and is less than (0.05), which indicates the choice of fixed effects. Finally the results will be commented on according to table 6 the fixed effects.

Table 6: Fixed Effect (ROE)

ROE	Coefficient	Standard Error.	T	P>t	95% Configuration	Interval/timeframe
Capital adequacy ratio CAR	0.7850701	0.3158118	2.49	0.015	0.1579304	1.41221
Cost to income CI	-					
Debt to equity DE	0.0267317	0.0108312	-2.47	0.016	-0.0482707	-0.0051927
Bank size BS	0.0201979	0.0106351	-1.9	0.061	-0.0413172	0.0009214
Assets to liabilities AL	0.0449004	0.0109028	4.12	0	0.0232497	0.0665512
Equity to assets ECA	0.1754522	0.0256999	6.83	0	0.1243451	0.2265592
_cons	-1.201488	0.7199562	-1.67	0.099	-2.631178	0.2282025
	-0.272991	0.1649731	-1.65	0.101	-0.6005955	0.0546122

According to table (5) and table (6) depicts results from “regression analysis. Values for “R-squared” in this model was 0.5011 for table 5.a and 0.4053 for table 6 with F value of 14.06 and 9.54 respectively this shows that results agree with most previous studies as it shows that capital adequacy ratio CAR is related positively to return on assets ROA and return on equity ROE, thus banks should focus on the capital adequacy ratio CAR ratio to ensure better performance. Burger found evidence of a relationship that is positive between capital assets ratio and equity returns (Flamini,v, 2009).The results also depicted that “costs income ratios” or cost to income CIR had a negative relationship or association with the return on equity ROE as well as return on assets ROA.

#### 4.4 Theoretical and Practical Implications

The theoretical importance of this study lies in the conceptual framework of the impact of the change in the rate of capital adequacy and the cost-to-income ratio on profitability, so that the study may be paved to benefit learners and researchers through the addition of knowledge that may be important around these ratios and work on modifying them to achieve better results so that the results of the current study and its recommendations are used to conduct further studies.

The practical importance of this study comes from its choice of data related to the financial statements of banks (operating expenses – operating income – capital adequacy ratio – cost to income ratio – Total Assets-Total Equity-Total Liabilities-Net profit) that will be studied from real data available at Kuwaiti Banks sites for the period from 2009-2018. This analytical descriptive study is useful for Kuwait banks especially and other banks in other countries, and therefore this study may help decision makers in banks to take advantage of the results and recommendations that will be achieved in order to develop and continuously improve the objective to achieve it.

## V. CONCLUSION

It was noted in this study that banks in Kuwait were in a better position of meeting competitive challenges from both a more liberal as well as open environments across the world. This is because they were lesser affected by the financial crisis that happened recently in the world. However. The results indicate that, the capital adequacy ratio CAR had a positive impact on return on assets ROA, whereas the cost to income ratio CIR and debt to equity ratio DE had negative impact on return on assets ROA, the other variables such as, bank size BS, assets to liabilities ratio AL and equity to assets ratio ECA with no impact on return on assets ROA it was also found that the Capital adequacy ratio CAR, bank size BS and assets to liabilities ratio AL had a positive impact on return on equity ROE, whereas the cost to income ratio CIR had a negative impact on return on equity ROE, the other variables such as, debt to equity ratio DE and equity to assets ratio ECA with no impact on return on equity ROE. It was further discovered that most banks in Kuwait were quite keen on ensuring that their levels of capital were above the set required minimum mandatory limits by the central bank of Kuwait.

This study added more information to past findings that indicated that there was a positive relationship or link performance and “capital adequacy”. It was further noted that requirements in “capital adequacy”

highly limited risk profiles of a bank's investments and thus highly affected their capacities of attained the profitability that has been targeted. This implies that essence of using capital adequacies was to enhance the profitability of banks and help in the reduction of expected costs in financial distress. The study uses both the ROE and the ROA as being proxies for the measurement of the financial performance of banks and it was ascertained that the financial performance of banks was indeed positively associated with the Capital adequacy ratio. The study further depicted that the financial performance of banks was negatively associated with costs to Income ratio CIR.

The most vital study finding that was not highlighted by similar studies that have been carried out is the fact that there are indeed differential effects or impacts of different "measures of capital adequacy" on the banks' performances. The study thus was aimed at finding out or ascertaining that Kuwaiti banks are operating above CAR thresholds and have noticed a positive increase in enhancing the CAR ratio whilst the CIR ratio shows a significant reduction in most of banking institutions in the presented sample, some banking institutions have it high and above the threshold and this indicates that these banks need to minimize their operating cost or put suitable strategies in expanding their operating income and attempting to improve their market share to enhance their performance. The findings are indeed essential because the risk adjustments by such banks aids in accounting for any form of uncertainties that are linked with the capital levels of the banks. This thus acted as a viable and reliable measurement regarding the composition and nature of "capital inherent" in the capital structure of Kuwaiti banks'.

The study also recommended a tendency to implement some mergers between local Kuwaiti banks internally or externally with banks outside Kuwait, which may help in expanding the customer base, geographical expansion, capital increase, reducing risks, enhancing investment operations, putting pressure on operating expenses and increasing revenues, which increases profits and increases the positive impact of financial performance. Among these mergers currently offered in Kuwait is the merger of two Islamic banks, namely Kuwait Finance House and Ahli United Bank. It is expected that this merger will turn Kuwait into a regional financial center by establishing a major Islamic financial entity. Increase the awareness towards improving the bank performance to its efficient status and Increase the criteria towards a more efficient banking performance through the continuous implementations of the central bank guidelines.

## References

- Aburime, T. (2008). Determinants of Bank Profitability: Company-Level Evidence from Nigeria. *SSRN Electronic Journal*. doi: 10.2139/ssrn.1106825
- al sabbagh. Determinants of capital adequacy ratio in Jordanian banks. *Yarmouk University*.
- Ali Khrawish, H., & Zakaria Siam, W. (2011). Determinants of bank profitability: Evidence from Jordan. *International Research Journal Of Finance And Economics*, 5(2), 19-45. doi: 10.15208/beh.2010.10
- Alzoubi, T. (2018). Determinants of bank profitability: Islamic versus conventional banks. *Banks And Bank Systems*, 13(3), 106-113. doi: 10.21511/bbs.13(3).2018.10
- Angbazo, L. (1997). Commercial bank net interest margins, default risk, interest-rate risk, and off-balance sheet banking. *Journal Of Banking & Finance*, 21(1), 55-87. doi: 10.1016/s0378-4266(96)00025-8
- Ariss, R., & Saredidine, Y. (2007). Challenges in implementing capital adequacy guidelines to Islamic banks. *Journal Of Banking Regulation*, 9(1), 46-59. doi: 10.1057/palgrave.jbr.2350059
- Athanasoglou, p., & Delis, M. (2006). Determinants of bank profitability in the South Eastern European region.
- Athanasoglou, P., Brissimis, S., & Delis, M. (2008). Bank-specific, industry-specific and macroeconomic determinants of bank profitability. *Journal Of International Financial Markets, Institutions And Money*, 18(2), 121-136. doi: 10.1016/j.intfin.2006.07.001
- Bagchi, B. (2013). Liquidity-profitability relationship: empirical evidence from Indian fast moving consumer goods firms. *International Journal Of Applied Management Science*, 5(4), 355-376. doi: 10.1504/ijams.2013.057109

- Barnor, c., & Odonkor, T. (2012). Capital adequacy and the performance of Ghanaian banks. *Journal Of Business Research*, 6(1), 1-6.
- Batani, L., Vakilifard, H., & Asghari, F. (2014). The Influential Factors on Capital Adequacy Ratio in Iranian Banks. *International Journal Of Economics And Finance*, 6(11). doi: 10.5539/ijef.v6n11p108
- Berger, A. (1995). The Profit-Structure Relationship in Banking--Tests of Market-Power and Efficient-Structure Hypotheses. *Journal Of Money, Credit And Banking*, 27(2), 404-431. doi: 10.2307/2077876
- Berger, A. (1995). The Relationship between Capital and Earnings in Banking. *Journal Of Money, Credit And Banking*, 27(2), 432-456. doi: 10.2307/2077877
- Berger, A., & Humphrey, D. (1997). Efficiency of financial institutions: International survey and directions for future research. *European Journal Of Operational Research*, 98(2), 175-212. doi: 10.1016/s0377-2217(96)00342-6
- Białas, M., & Solek, A. (2010). EVOLUTION OF CAPITAL ADEQUACY RATIO. *Economics & Sociology*, 3(2), 48-57. doi: 10.14254/2071-789x.2010/3-2/5
- Boudriga, A., BoulilaTaktak, N., & Jellouli, S. (2009). Banking supervision and nonperforming loans: a cross-country analysis. *Journal Of Financial Economic Policy*, 1(4), 286-318. doi: 10.1108/17576380911050043
- Budiyono, B. (2017). Factors Affecting Banking Profitability in Indonesia (Studies at Bank BRI, Bank BNI, and Bank BTN). *International Journal Of Economics, Business And Accounting Research (IJEBAR)*, 1(01). doi: 10.29040/ijebar.v1i01.169
- Christian, c., Moffitt, J., & Suberly, L. (2008). Fundamental Analysis for Evaluating Bank Performance: What Variables Provide the Greatest Insight into Future Earnings? *Journal Of Bank Accounting And Finance*, 22, 17-24.
- Cotter, R. (1966). Capital ratios and capital adequacy. *The International Journal Of Applied Economics And Finance*, 3(2), 35-47.
- Degar, A., & Adem, A. (2011). Bank specific and macroeconomic determinants of bank profitability: Empirical evidence from Turkey. *Business And Economics Research Journal*, 2(2), 139-159.
- Ekonomika. (2014). capital Adequacy (Solvency) and Liquidity Risk, 93(4).
- Fiordelisi, F., Marques-Ibanez, D., & Molyneux, P. (2011). Efficiency and risk in European banking. *Journal Of Banking & Finance*, 35(5), 1315-1326. doi: 10.1016/j.jbankfin.2010.10.005
- Flamini, V., Schumacher, L., & McDonald, C. (2009). The Determinants of Commercial Bank Profitability in Sub-Saharan Africa. *IMF Working Papers*, 09(15), 1. doi: 10.5089/9781451871623.001
- Ghadimi, M., Taghavi, M., & Kassaipour, N. (2012). A study on the effect of different factors on profitability of banking system. *Management Science Letters*, 2(6), 1849-1854. doi: 10.5267/j.msl.2012.06.039
- Ghosh, S., Nachane, D., Narain, A., & Sahoo, S. (2003). Capital requirements and bank behaviour: an empirical analysis of Indian public sector banks. *Journal Of International Development*, 15(2), 145-156. doi: 10.1002/jid.947
- Gilbert, R., & Wheelock, D. (2007). Measuring Commercial Bank Profitability: Proceed with Caution. *Review*, 89(6). doi: 10.20955/r.89.515-532
- Goddard, J., Molyneux, P., & Wilson, J. (2004). The profitability of European banks: a cross-sectional and dynamic panel analysis. *The Manchester School*, 72(3), 363-381. doi: 10.1111/j.1467-9957.2004.00397.x
- Hani (2015), The relationship between the application of capital adequacy in accordance with Basel decisions and the profitability of local commercial banks in Palestine

- Hess, K., & Francis, G. (2004). Cost income ratio benchmarking in banking: a case study. *Benchmarking: An International Journal*, 11(3), 303-319. doi: 10.1108/14635770410538772
- Ho, S., & Hsu, S. (2010). Leverage, performance and capital adequacy ratio in Taiwan's banking industry. *Japan And The World Economy*, 22(4), 264-272. doi: 10.1016/j.japwor.2010.06.007
- Irshad, G., & Zaman. (2011). Factors Affecting Bank Profitability in Pakistan. *The Romanian Economic Journal*, 39, 61.
- Jaber, J., & Al-khawaldeh, A. (2014). The Impact of Internal and External Factors on Commercial Bank Profitability in Jordan. *International Journal Of Business And Management*, 9(4). doi: 10.5539/ijbm.v9n4p22
- Jasevičienė, F., & Jurkšaitytė, D. (2015). THE NEW CAPITAL ADEQUACY FRAMEWORK (BASEL III) OPTIONS AND ISSUES IN COMMERCIAL BANKS OF LITHUANIA. *Ekonomika*, 93(4), 119-134. doi: 10.15388/ekon.2014.93.5043
- Javid, A., Zaman, K., & Gaffor, A. (2011). Determinants of Bank Profitability in Pakistan: Internal Factor Analysis. *Mediterranean Journal Of Social Sciences*, 2(1).
- Joshi, R. (2004). Liquidity ratio and profitability of the banks. *The Journal Of Nepalese Business Studies*, 2(4), 32-45.
- Karki, L. (2004). Liquidity ratio with loan and advances. *Journal Of Nepalese Business Studies*, 2(4), 32-45.
- Kinnon, M. (1973). Money and capital in economic development. *The American Political Science Review*, 68(4), 1822-1824
- Kundid, A. (2012). How Much is the Choice of Capital Structure Important for Bank Profitability in Croatia. *Zagreb International Review Of Economics & Business*, 15, 53-68.
- Mahrajan, M. (2007). Impact of liquidity in the economy. *Journal Of Management*, 9(2), 34-41.
- Mamonov, M., & Vernikov, A. (2015). Bank Ownership and Cost Efficiency in Russia, Revisited. *SSRN Electronic Journal*. doi: 10.2139/ssrn.2574667
- Marahatta, S., Devkota, s., Bhandri, S., & Pradhan, s. (2016). Determinants of banks performance: A case of Nepalese banks. *Nepalese Journal Of Management*, 3(1), 82-94.
- Mathuva, D. (2009). Capital Adequacy, Cost Income Ratio and the Performance of Commercial Banks: The Kenyan Scenario. *The International Journal Of Applied Economics And Finance*, 3(2), 35-47. doi: 10.3923/ijaef.2009.35.47
- Mohammad and Alaa (2017), the effect of capital adequacy, according to the requirements of the Basel 3 Committee, on the profitability of commercial banks. (n.d.). An Applied Study on a Sample of Private Iraqi Banks.
- Molyneux, P., & Thornton, J. (1992). Determinants of European bank profitability: A note. *Journal of Banking & Finance*, 16(6), 1173-1178. doi: 10.1016/0378-4266(92)90065-8
- Molyneux, P., & Thornton, J. (1992). Determinants of European bank profitability: A note. *Journal Of Banking & Finance*, 16(6), 1173-1178. doi: 10.1016/0378-4266(92)90065-8
- Mostafa, M. (2007). Benchmarking top Arab banks' efficiency through efficient frontier analysis. *Industrial Management & Data Systems*, 107(6), 802-823. doi: 10.1108/02635570710758734
- Oino, I. (2015). Competitiveness and Determinants of Bank Profitability in Sub-Saharan Africa. *International Journal Of Economics And Finance*, 7(10). doi: 10.5539/ijef.v7n10p151
- Ormiston, A., & Frase, B. (2004). understanding financial statements.
- Pasiouras, F., & Kosmidou, K. (2007). Factors influencing the profitability of domestic and foreign commercial banks in the European Union. *Research In International Business And Finance*, 21(2), 222-237. doi: 10.1016/j.ribaf.2006.03.007

- Pastory, D., & Mutaju, M. (2013). The Influence of Capital Adequacy on Asset Quality Position of Banks in Tanzania. *International Journal Of Economics And Finance*, 5(2). doi: 10.5539/ijef.v5n2p179
- Polat, A., & Al-Khalaf, H. (2014). *Journal Of Applied Finance & Banking*, 4(1792-6580), 4-27.
- Ramlan, H., & Adnan, M. (2016). The Profitability of Islamic and Conventional Bank: Case Study in Malaysia. *Procedia Economics And Finance*, 35, 359-367. doi: 10.1016/s2212-5671(16)00044-7
- Ramlan, H., & Adnan, M. (2016). The Profitability of Islamic and Conventional Bank: Case Study in Malaysia. *Procedia Economics And Finance*, 35, 359-367. doi: 10.1016/s2212-5671(16)00044-7
- Samadi, M. (2012). An empirical study on the impact of operating risk on structure capital and profitability in Iranian banking sector. *Management Science Letters*, 2(5), 1689-1694. doi: 10.5267/j.msl.2012.04.020
- Sinkey, J., & Greenawalt, M. (1991). Loan-loss experience and risk-taking behavior at large commercial banks. *Journal Of Financial Services Research*, 5(1), 43-59. doi: 10.1007/bf00127083
- Smirlock, M. (1985). Evidence on the (Non) Relationship between Concentration and Profitability in Banking. *Journal Of Money, Credit And Banking*, 17(1), 69. doi: 10.2307/1992507
- Sufian, F. (2010). Developments in the profitability of the Thailand banking sector: panel evidence from the post Asian crisis period. *International Journal Of Economics And Accounting*, 1(1/2), 161. doi: 10.1504/ijea.2010.033907
- Sufian, F., & Habibullah, M. (2009). DETERMINANTS OF BANK PROFITABILITY IN A DEVELOPING ECONOMY: EMPIRICAL EVIDENCE FROM BANGLADESH. *Journal Of Business Economics And Management*, 10(3), 207-217. doi: 10.3846/1611-1699.2009.10.207-217
- Sufian, F., & Noor Mohamad Noor, M. (2012). Determinants of Bank Performance in a Developing Economy. *Global Business Review*, 13(1), 1-23. doi: 10.1177/097215091101300101
- Žuk-Butkuvienė, A., Vaitulevičienė, D., & Staroselskaja, J. (2014). Capital Adequacy (Solvency) And Liquidity Risk Management: Analysis, Evaluation, And Possibilities For Improvement. *Ekonomika*, 93(2), 59-76. doi: 10.15388/ekon.2014.2.3546