

# The Political Crisis and Bank Financial Performance: Evidence from the Middle East

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## Abstract

The political crisis happened in the Middle East and still continues in some countries affected its economic indicators. Due to the importance of banks in every economy, this study examines the impact of political crisis and bank internal factors on financial performance of 61 banks in Bahrain, Egypt, Syria and Yemen during the period 2004 – 2014 using financial ratio analysis technique. The effect of political crisis on bank performance is negative. The findings also state that financial performance of selected countries' banks is affected positively by capital adequacy, bank size, asset management and operating efficiency. On the other hand, the factors of credit risk, asset quality and overheads have a negative impact on this performance. However, the ratios of management quality, capital ratio, cost to income ratio, deposits and liquidity have no significant impact on ROAA.

**Keywords:** Financial Performance, Political Crisis, Middle East, Return on Assets.

## 1. Introduction

The term that called "Arab Spring" is used to express the political crisis happening in the Middle East countries started on December 2010 in Tunisia and expanded throughout the other Arab countries. It includes public protests and demonstrations against current political regimes, in addition to war and armed conflict in some countries such as Syria which is considered, according to the Global Peace Index (GPI) Report which was published by Institute for Economics and Peace in 2014, as the most dangerous country in the world. The major events happened in 7 countries namely; Bahrain, Iraq, Egypt, Libya, Syria, Tunisia and Yemen.

The claim that this period is "spring" is not true, it can be called "winter" especially for economy. It affected these countries' economies in different ways. In Tunisia, for instance, banks' performance decreased, inflation rate increased. In Egypt, real Gross Domestic Product (GDP) dropped down and stock market value declined about 15% (IMF, 2014).

Generally, the banking system is the main nerve which regulates the economic and social life cycle in different economies, and it is one of the most important economic and social development indicators. The developed economic system must have a sophisticated banking system which contributes in the process of achieving economic balance, and encourages investment activities through its facilities and guarantees. In addition, the sophisticated banking system has a high potential to attract domestic and foreign savings and use it to support economic stability and development.

The way to know the soundness of bank and other firms is to measure its financial performance. To achieve that banks and financial institutions use financial ratio analysis (Avkiran, 1995) depending on set of ratios that help to analyze and compare financial performance among them and evaluate the efficiency of any business. This approach gives a simple interpretation about the bank's performance in comparison with other periods and helps to improve its management performance (Lin et al., 2005). The current study tests the impact of the Political crisis and other factors on financial performance of banks using data from Bahrain, Egypt, Syria and Yemen during the period 2004- 2014.

The current study is organized as follow: the next section following the introduction discusses the literature review. In the third section, methodology of the study is discussed. The fourth section provides data analysis and discussion.

## 2. Literature Review

Many researchers investigated factors affecting financial performance of banks. Bashir (2003) examined bank's characteristics affecting profitability of 14 Islamic banks in 8 countries in the Middle East (Bahrain, Egypt, Jordan, Kuwait, Qatar, Sudan, Turkey and U.A.E) during 1993- 1998. He found a direct effect for capital and loans variables on bank's profits measured by ROA, ROE and Before Tax Profit (BTF). Also there are positive relations between overhead ratios and dependent variables.

Halkos & Salamouris (2004) evaluated the profitability of Greek banks over the years 1997 to 1999. It is found that banks differ from each others according to its performance. It is also found that bank size has a direct impact on bank performance and this relation is not exist between ownership and performance. Tarawneh

(2006) used ROA and NIM ratios to rank Omani banks from 1999 to 2003. also the study examined the effects of banks size, assets management and operating efficiency on these ratios. The results showed positive relations between dependent and independent variables.

Kumbirai & Webb (2010) used financial ratio analysis to evaluate the financial performance of South African commercial banks. The ratios of profitability, liquidity and credit risk were measured from 2005- 2009. The banks' performance showed some improvements during the first three years of the study. But, due to the financial crisis, the performance started to decline in 2008 and 2009. the results indicated that the profitability performance was better before the financial crisis and no significance difference according to liquidity and credit risk performance.

Gul, Irshad, & Zaman (2011) aimed to examine factors affecting profitability of 15 commercial banks in Pakistan during the period 2005- 2009. They found that bank size has a positive relation with ROA and ROE and has a negative impact on NIM. Deposits and loans ratios also have the same effect on dependent variables. The study found that capital ratio has a negative impact on all dependent variables.

Ramadan, Kilani, & Kaddumi (2011) tested the relation between external and internal determinants and bank's profitability in Jordan. Data were collected from 10 Jordanian banks for the period 2001- 2010. The results presented a positive effect for capital adequacy and assets composition on ROA. While only capital adequacy has direct impact on ROE. On the other hand, credit risk and overhead ratios have reverse impact on ROA and insignificant effect on ROE. Moreover, bank size has no effect neither on ROA nor ROE. Almazari (2011) aimed to evaluate the bank's performance and classify the selected Jordanian banks according to the performance measurement for the period 2005- 2009. Also the study tried to find out the factors affecting bank's performance. The study found that ROA is affected positively by asset management and negatively by bank size and operating efficiency.

Mirzaei & Mirzaei (2011) investigated the internal and external factors affecting financial performance, measured by ROAA and ROAE, of 175 banks from 12 Middle East countries, over the period 1999- 2008 using the Generalized Method of Moments (GMM) model. The findings refer to positive relations between profitability indicators and capital ratio. Also the study found negative relations between banks' financial performance and credit risk, liquidity, efficiency and inflation factors. Moreover, loan to total assets and bank size ratios have no effect on banks' profits.

Jha & Hui (2012) studied the effect of ownership structure and other factors on financial performance of Nepali commercial banks over period 2005- 2010 using CAMEL approach. The study found that the ratios of capital adequacy and management efficiency have a reverse impact on ROA. This impact is positive with the ratio of earnings.

Ani et al (2012) aimed to examine factors affecting profitability of 15 Nigerian banks during the period 2010- 2012. The study concluded that capital adequacy and assets composition have the major and positive impact on bank profitability (ROA) in Nigeria. Whereas, the size of bank has a negative impact on ROA. Syafri (2012) aimed to observe a set of variables that may have effect on bank's profitability in Indonesia for the period 2002- 2011. ROA was used a proxy of profitability. The results found that ROA is directly affected by credit risk, capital adequacy and total loans to total assets factors. On the other hand, bank size, inflation and operating efficiency have negative effects. However, ROA isn't affected by non interest income.

Alkhatib (2012) studied the financial performance of listed Palestinian banks over 2005- 2010 and the factors that have impact on it. The study used ROA, price to book value of equity and economic value added (EVA) as proxies of financial performance. The study revealed that bank size has a strong positive effect on all dependent variables. The same thing with the ratio of asset management, but with a weak impact. Moreover, credit risk and operating efficiency ratios have negative impact on all dependent variable expect credit risk which has a strong positive correlation with EVA.

ALMUMANI (2013) tested the performance efficiency of Saudi banks 2007- 2011 using data envelopment analysis technique. The study revealed that banks are financially efficient and its performance has a negative relation with bank size, capital adequacy ratio and efficiency.

Ameur & Mhiri (2013) investigated the explanatory factors of 10 commercial banks in Tunisia during 1998-2011. The outcomes of this study concluded that bank size and operating efficiency have negative relations with the dependent variables (ROA, ROE, and NIM). But non- performing loans to total loans ratio and capital ratio have positive impact on bank's performance expect the relation between ROE and capital ratio, which is negative. The results also showed that bank ownership has a positive effect on bank's profitability and private banks seemed to make more profit the public ones.

Ongore & Kusa (2013) analyzed the determinating factors of financial performance in Kenya during 2000- 2010. They used data from 37 commercial banks and applied the multiple regression model. The results found that capital adequacy ratio, asset quality and management efficiency factors have significant effects on bank's performance in Kenya.

Abdelbaki (2013) examined the impact of Egyption revolution as a part of "Arab spring" and

instability in politics and economy and other factors on the performance of stock market exchange in Egypt during period 23-3-2011 to 30-11-2011. He found that all factors affect market performance negatively. However, political instability is the most important factor and has more impact on market performance than economic instability and exchange rate as an external vector.

Shah & Jan (2014) examined the profitability of private commercial banks in Pakistan and its relation with selected factors. The study covered the period 2006- 2010 of the best Pakistani private banks and found that bank size affects ROA negatively and NIM positively. While operating efficiency has a negative impact on both performance indicators. Moreover, there is a direct relation between asset management and ROA, this relation is negative with NIM.

Al-Jafari & Alchami (2014) examined the internal and external factors affecting financial performance, measured by ROAA and ROAE, of 17 banks in Syria over the period 2004- 2011 using the Generalized Method of Moments (GMM) model. The results revealed that ROAA is affected negatively by GDP, credit risk and liquidity ratios and positively by banks size and operating efficiency. While there are no effects on ROAA by inflation and capital ratios. On the other hand, ROAE is affected positively by inflation and negatively by GDP and credit risk ratios.

Ali (2014) examined political and economic changes in Libya, Egypt, Tunisia and Yemen after “Arab spring”. He found that economic growth dropped between 2010 and 2011 in all countries except Libya which depends on oil in its economy. However, Yemen recorded a negative growth in 2011.

Ghosh (2015) studied the impact of political transitions on the performance of 102 Arab banks in 12 Arab countries during 2000- 2012. The results concluded that “Arab spring” affected bank’s performance of Arab countries by decreasing profitability (ROA) and raising risk (Z-score). It is found also that the performance of Islamic banks are not affected as much as traditional banks.

Owusu-Antwi et al (2015) tested the determinants of Ghana’s bank performance for the period 1988-2011 using Economic Value Added (EVA) model. Statistical analysis showed strong and positive relations between dependent variables (EVA and ROA) and explanatory factors namely: cost to income ratio, liquidity, bank size and net loans to total assets ratio. However, macroeconomics factors (inflation and unemployment) don’t seem to affect bank’s performance in Ghana.

This study will use Return on Average Assets (ROAA) as an indicator of financial performance of banks, and will use a set of internal factors that are studied before namely: asset management, bank size, deposits, capital adequacy, operating efficiency, loans, credit risk, overheads, management quality and liquidity ratios to examine its effect on profitability of Political crisis countries’ banks during 2004- 2014. In addition to a dummy variable Called “criss” to express the impact of political crisis in the Middle East on the financial performance of banks in selected countries.

### 3. Methodology

The relevant literature was reviewed in the previous section. This section discusses research methodology aspects.

#### 3.1. Data Collection

This study uses a secondary data to test the model. Data were collected from bank scope database which is a world banking information source. Some ratios have already done by database, but other ratios need to be transformed into the ratios defined in table 3.

The aim of this study is to investigate the factors affecting financial performance of banks in four countries, which are: Bahrain, Egypt, Syria and Yemen. The number of banks that have detailed financial statements on Bank Scope database is 114 banks. The missing values are excluded from the population and the outliers of each variable also excluded. The final sample includes 61 banks with 309 bank-year observations. The distribution of sample by country is described in table 1.

**Table 1: The distribution of sample by country**

Country	No. of Banks	No. of Observations	Percentage
Bahrain	15	84	27.18%
Egypt	25	112	36.25%
Syria	14	76	24.60%
Yemen	7	37	11.97%
Total	61	309	100%

Table 2 provides a summary statistics of variables in the sample. The current study used ROAA ratio as a proxy of bank’s financial performance. Mean value of ROAA is 1.43% with 911 observations, the minimum value is (-37.98) and 30.84 is the maximum one. The study also used 13 financial ratios as dependent variables to investigate its effects on financial profitability; the description of these independent variables is shown in table 3.

### 3.2. Variables definition and Model development

Table 4 presents the definition of the dependent variable and independent variables used in this study.

In this study, the bank's performance is a function of bank specific vectors. The model is as follow:

$$Per_{i,t} = f(AM_{i,t}, BS_{i,t}, DEPOS_{i,t}, CA_{i,t}, OE_{i,t}, LOAN_{i,t}, NPL_{i,t}, LQD_{i,t}, CIR_{i,t}, CR_{i,t}, OVERHD_{i,t}, MQ_{i,t}, CRIS_{j,t}) \quad (Eq. 1)$$

Where:  $Per_{i,t}$  is the bank performance indicator (ROAA) for bank  $i$  at time  $t$ ; the right side of the model refer to independent variables for bank  $i$  during time  $t$ .

**Table 2: Summary statistics of variables**

Variable	Observations	Mean	Std. Dev.	Min	Max
ROAA	911	1.43	5.87	-37.98	30.84
NPL	434	13.84	16.1	0	83.2
MQ	416	4.78	4.26	0.05	51.06
LOAN	811	36.02	21.62	0.04	98.92
CA	926	26.65	27.29	-15.28	99.82
CR	581	29.34	21.18	1.1	118.2
CIR	871	60.38	51.82	-187.42	461.78
BS	926	6.1	0.73	4.08	7.91
AM	909	5.46	5.88	-14.66	38.36
OE	900	88.92	592.11	-3466.67	6200
DEPOS	857	66.56	26.64	0.12	93.93
OVERHD	911	3.26	3.78	0.05	37.74
LQD	924	32.61	22.08	0.08	97.31
CRIS	1254	0.36	0.48	0	1

In this model, the data used are time series and cross sectional data (Panel Data). The econometrics model will be as follow:

$$Per_{i,t} = \alpha_i + \beta_i X_{i,t} + \epsilon_{i,t} \quad i = 1, 2, \dots, N; \quad t = 1, 2, \dots, T \quad (Eq. 2)$$

Where:  $Per_{i,t}$  is the bank performance indicator (ROAA);  $\alpha_i$  is the intercept specific to each country;  $\beta$  is the coefficient;  $X_{i,t}$  is the set of independent variables;  $\epsilon_{i,t}$  is the error term.

**Table 3: Definition of variables**

Variable	Code	Type	Measurement
Return on Average Assets	ROAA	Dependent	ROAA = Net Income / Average Total Assets
Assets Management	AM	Independent	AM = Net Operating Income / Total Assets
Bank Size	BS	Independent	BS = Log (Total assets)
Deposits	DEPOS	Independent	DEPOS = Total deposits / Total assets
Capital Adequacy	CA	Independent	CA = Total equity / Total assets
Operating Efficiency	OE	Independent	OE = Total Operating Expenses/ Net Interest Income
Assets quality	LOAN	Independent	LOAN = Total Loans / Total assets
Credit Risk	NPL	Independent	NPL = Non-Performing Loans / Total Loans
Liquidity	LQD	Independent	LQD = Liquid Assets / Total assets
Cost to income ratio	CIR	Independent	CIR = Total Cost / Net Income
Capital Ratio	CR	Independent	CR = Capital / Total Equity
Overheads	OVERHD	Independent	OVERHD = Overheads / Total Assets
Management Quality	MQ	Independent	MQ = Interest Paid / Total Deposits
Political crisis	CRIS	Independent	CRIS = 0 (Before Political crisis), 1 (During Political crisis)

Thus, the regression model derived from Eq.1 and Eq.2 is as follow:

$$Per_{i,t} = \alpha_i + \beta_{1i} * AM_{i,t} + \beta_{2i} * BS_{i,t} + \beta_{3i} * DEPOS_{i,t} + \beta_{4i} * CA_{i,t} + \beta_{5i} * OE_{i,t} + \beta_{6i} * LOAN_{i,t} + \beta_{7i} * NPL_{i,t} + \beta_{8i} * LQD_{i,t} + \beta_{9i} * CIR_{i,t} + \beta_{10i} * CR_{i,t} + \beta_{11i} * OVERHD_{i,t} + \beta_{12i} * MQ_{i,t} + \beta_{13i} * CRIS_{i,t} + \epsilon_{i,t} \quad i = 1, 2, \dots, N; \quad t = 1, 2, \dots, T \quad (Eq. 3)$$

### 3.3. Hypotheses Testing

This study aims to investigate the impact of political crisis and other factors on the financial performance of banks measured by ROAA. To achieve this objective, the study sets the following hypotheses:

- Hypothesis 1: Assets Management has a positive effect on bank performance
- Hypothesis 2: Bank Size has a positive effect on bank performance
- Hypothesis 3: Deposits have a positive effect on bank performance
- Hypothesis 4: Capital adequacy has a positive effect on bank performance
- Hypothesis 5: Operating efficiency has a negative effect on bank performance
- Hypothesis 6: Asset quality has a positive effect on bank performance
- Hypothesis 7: Credit risk has a negative effect on bank performance
- Hypothesis 8: Management quality has a positive effect on bank performance
- Hypothesis 9: Cost to income ratio has a negative effect on bank performance
- Hypothesis 10: Capital Ratio has a positive effect on bank performance
- Hypothesis 11: Overheads have a negative effect on bank performance
- Hypothesis 12: Liquidity has a negative effect on bank performance
- Hypothesis 13: Political crisis has a negative effect on bank performance

## 4. Data Analysis and Discussion

### 4.1. Regression Analysis

To investigate the factors affecting bank's financial performance, study runs multiple regression model using panel data technique. In this technique, fixed effect, random effect and ordinary least square (OLS) models were taken in consideration to run the fit model. The model and test were run with the help of STATA 12. First, the correlation matrix is presented. The matrix shows the correlations between dependent and independent variables and correlations between independent variables itself. The highest correlation is (-0.79) which is between deposits and capital adequacy. It is clear from correlation matrix that no high correlations between variables and no need to drop any of them. The details of correlation matrix are shown in table 4.

The second step in our analysis is to know the best model in this case. We started with Hausman test to know which model is better to use, fixed effect or random effect (Hausman, 1978). Table 5 describes results of Hausman test. At 5% significance level, P-value of this test equals 0.0972 is bigger than 0.05. Thus, we can't reject null hypothesis which claims that difference in coefficients not systematic. As a result, random effect model is better to use in this case.

**Table 4: Correlation Matrix**

	ROAA	NPL	MQ	LOAN	CA	CR	CIR	BS	AM	OE	DEPOS	OVERHD	LQD	CRIS
ROAA	1													
NPL	0.03	1												
MQ	0.11	0.2	1											
LOAN	-0.12	-0.49	-0.32	1										
CA	0.31	0.08	-0.1	-0.01	1									
CR	0.15	0.15	0.18	-0.2	0.48	1								
CIR	-0.4	0.04	-0.04	-0.02	0	-0.08	1							
BS	0.06	-0.38	-0.2	0.25	-0.37	-0.42	-0.16	1						
AM	0.66	0.44	0.22	-0.24	0.4	0.21	-0.25	-0.3	1					
OE	0.1	0.02	-0.03	-0.05	0.19	0.17	0	-0.11	0.07	1				
DEPOS	-0.26	0.03	0.06	0.04	-0.79	-0.41	0.03	0.23	-0.29	-0.16	1			
OVERHD	-0.35	0.34	0.09	-0.16	0.33	0.11	0.3	-0.45	0.27	0.09	-0.22	1		
LQD	-0.11	0.26	-0.06	-0.42	-0.02	0.28	0.06	-0.43	-0.04	0.05	-0.01	0.05	1	
CRIS	0.07	0.16	0.04	0	0.01	-0.08	-0.1	0.03	0.22	0.03	0.05	0.09	-0.3	1

**Table 5: Hausman test**

	---- Coefficients ----			
	(b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
NPL	-0.0273478	-0.0292371	0.0018893	0.0067258
MQ	0.049848	0.0349384	0.0149097	0.0267064
LOAN	-0.0050115	-0.0184232	0.0134118	0.0091227
CA	0.0357184	0.0646642	-0.0289458	0.0210248
CR	-0.0010024	-0.0058754	0.004873	0.006403
CIR	-0.002761	-0.0014308	-0.0013302	0.0007635
BS	1.392734	0.3324161	1.060318	0.8040254
AM	0.8232656	0.865393	-0.0421274	0.0400754
OE	0.0011687	0.0013648	-0.0001961	0.0000941
DEPOS	0.0092966	0.0096974	-0.0004008	0.0100702
OVERHD	-1.092673	-1.191028	0.098355	0.0948065
LQD	-0.0060532	-0.003857	-0.0021962	0.005594
CRIS	-0.4405964	-0.3249151	-0.1156813	0.1128197

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\chi^2(12) = (b-B)'[(V_b-V_B)^{-1}](b-B) = 18.65$$

$$\text{Prob} > \chi^2 = 0.0972$$

We also used Breusch and Pagan Lagrangian multiplier test for random effects (LM test) to determine what to use random effect or OLS? (Breusch & Pagan, 1980). Table 6 presents results of LM test.

At 5% significance level, P-value of this test equals 0.1415 is bigger than 0.05. Thus, we can't reject null hypothesis which claims that variance equals to zero; this means the change in countries and years doesn't affect the model and OLS model is preferred here.

**Table 6: LM test**

Estimated results:

	Var	SD=SQRT(Var)
ROAA	7.514717	2.741298
E	1.267408	1.125792
U	0.082562	0.2873351

Test: Var(u) = 0

$$\text{chibar}2(01) = 1.15$$

$$\text{Prob} > \text{chibar}2 = 0.1415$$

Other tests were used in this analysis to check multicollinearity and heteroskedasticity; variance inflation factor (VIF) test was used to check for multicollinearity. If VIF exceeds 10, then multicollinearity is said to be highly (Gujarati, 2004, p362-363). Table 7 presents the VIF test's result.

**Table 7: VIF test**

Variable	VIF	1/VIF
CA	3.93	0.254172
DEPOS	2.86	0.349466
BS	2.15	0.46612
LQD	2.07	0.48296
AM	1.86	0.536441
NPL	1.83	0.545062
LOAN	1.76	0.569455
CR	1.7	0.587654
OVERHD	1.58	0.631004
MQ	1.47	0.679756
CIR	1.31	0.760565
CRIS	1.23	0.812157
OE	1.06	0.947281
Mean	VIF	1.91

It is clear from table that all VIF values are less than 10 and the biggest value is 3.93. This means that no multicollinearity between explanatory variables. We also checked if heteroskedasticity exists or not by using Breusch-Pagan / Cook-Weisberg test for heteroskedasticity (Breusch & Pagan, 1980). The test rejected null hypothesis and accepted the alternative one which claims that there is a heteroskedasticity problem, but we controlled it with the help of Robust.

We found that the fit model is OLS and there is no multicollinearity between independent variables. In addition, we controlled the problem of heteroskedasticity. Thus, the final results of this analysis are as in table 8.

**Table 8: Linear Regression results**

Linear regression

Number of obs = 309

F( 13,295) = 20.05

Prob> F = 0.0000

R-squared = 0.8228

Root MSE = 1.1792

ROAA	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
NPL	-0.02852	0.006288	-4.54	0.000***	-0.04089	-0.01614
MQ	0.034184	0.030544	1.12	0.264	-0.02593	0.094295
LOAN	-0.0188	0.005235	-3.59	0.000***	-0.0291	-0.0085
CA	0.067112	0.015496	4.33	0.000***	0.036616	0.097609
CR	-0.00604	0.005912	-1.02	0.308	-0.01767	0.005597
CIR	-0.00149	0.002771	-0.54	0.592	-0.00694	0.003967
BS	0.361925	0.16969	2.13	0.034**	0.027969	0.695881
AM	0.865444	0.077029	11.24	0.000***	0.71385	1.017039
OE	0.001384	0.000746	1.86	0.064*	-8.3E-05	0.002851
DEPOS	0.010194	0.007426	1.37	0.171	-0.00442	0.024808
OVERHD	-1.19031	0.15343	-7.76	0.000***	-1.49226	-0.88835
LQD	-0.00341	0.004037	-0.85	0.399	-0.01136	0.004533
CRIS	-0.32438	0.148053	-2.19	0.029**	-0.61575	-0.03301
_cons	-2.76073	1.730364	-1.6	0.112	-6.16616	0.644691

\*\*\* 1% significance level

\*\* 5% significance level

\* 10% significance level

Table 8 presents the impact of explanatory variables on bank's financial performance measured by ROAA. The model is significant at 1% significance level with 309 bank-year observations; the table shows that R square of this sample regression is about 83%, that is, about 83 percent of the variation in the dependent variable, ROAA, is explained by the independent variables.

The findings show that NPL has a negative impact on ROAA at 1% significance level; 1% increase in NPL will decrease ROAA about 0.03%. The same findings were conducted by (Al-Jafari & Alchami, 2014; Alkhatib, 2012; Ongore & Kusa, 2013; Mirzaei & Mirzaei, 2011). Also LOAN has a negative effect at the same level, when LOAN increases 1% ROAA declines about 0.02%. This finding doesn't consistent with any previous study. Moreover, OVERHD tends to affect ROAA negatively at 1% significance level, ROAA will drop 1.19%

when OVERHD rises 1% at 5% significance level, Almazari (2011) got the same result. We found that CRIS has this negative effect on ROAA; and that what Ghosh (2015) found recently. On the other hand, CA and AM ratios affect ROAA positively and strongly at 1% significance level; 1% rise of CA and AM tends to increase ROAA about 0.07% and 0.87% respectively, the findings of CA consistent with (Ongore & Kusa, 2013; Syafri, 2012; BASHIR, 2003), and the findings were also found by (Tarawneh, 2006; Almazari, 2011; Shah & Jan, 2014; Alkhatib, 2012). BS has the same effect at 5% with 0.36 % increase, the studies of (Al-Jafari & Alchami, 2014; Tarawneh, 2006; Alkhatib, 2012; Owusu-Antwi, Mensah, Crabbe, & Antwi, 2015) showed the same conclusion. At 10% significance level we found that OE affects positively ROAA, this effect is only about 0.001%. Al-Jafari & Alchami (2014) and Tarawneh (2006) have same results. However, the ratios of MQ, CR, CIR, DEPOS and LQD have no significant impact on ROAA.

#### 4.2. Conclusion

This study examined the relationships between independent variables namely; Asset management, bank size, deposits, capital adequacy, operating efficiency, asset quality, credit risk, management quality, cost to income ratio, capital ratio, overheads, liquidity and political crisis and the dependent variable, Financial performance measured by return on average assets. The results showed that the determinants of return on average assets are: credit risk, asset quality, capital adequacy, bank size, asset management, operating efficiency, overheads and Political crisis. The positive factors are: capital adequacy, bank size, asset management and operating efficiency. While, credit risk, asset quality, overheads and Political crisis are the negative factors.

#### 4.3. Limitations

As any research, this study has limitations. These limitations can be as follow:

- a. The study is limited to an eleven years period from 2004 to 2014.
- b. The financial performance measurement is based on historical financial data from financial statements which has some element of inflation.
- c. The research depends only on financial ratio approach and excludes other models.

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### Appendix

**Table 1: The relationship between dependent and independent variables in the literature**

BS	AM	CA	LOAN	DEPOS	OE	NPL	MQ	OVERHD	LQD	Related Literature
		+	+	+				+		Bashir (2003)
+										Halkos & Salamouris (2004)
+	+				+					Tarawneh (2006)
+			+	+						Gul, Irshad, & Zaman (2011)
*		+	+			-		-		Ramadan, Kilani, & Kaddumi (2011)
-	+				-					Almazari (2011)
*			*		-	-			-	Mirzaei & Mirzaei (2011)
		-					-			Jha & Hui (2012)
-		+	+							Ani et al (2012)
-		+	+		-	+				Syafri (2012)
+	+				-	-				Alkhatib (2012)
			+		-	+				Amour & Mhiri (2013)
		+	+				+		*	Ongore & Kusa (2013)
-	+				-					Shah & Jan (2014)
+		*			+	-			-	Al-Jafari & Alchami (2014)
+			+						+	Owusu-Antwi et al (2015)

(+) Positive relation    (-) Negative relation    (\*) insignificant