

FACTORS AFFECTING GUMHOURIA BANK'S PROFITABILITY. EMPIRICAL EVIDENCE FROM BIGGEST COMMERCIAL BANK IN LIBYA

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Abstract

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The main purpose of this paper is to examine the factors affecting the profitability of (Gumhouria) bank in Libya, over the time period from 2000 to 2010. Return on equity (ROE) is used as profitability measures to determine the affect of internal and external factors on profitability. The descriptive, correlation and regression analysis results are derived with the help of SPSS. The results show that all factors (Portfolio Composition, Capital Adequacy, Deposits, Size, GDP, CPI), establish positive relation with profitability as measured by (ROE) in different significance.

bank profitability, Gumhouria Bank, capital adequacy, Return on Equity (ROE), Libya

Middle East is a region with diverse economy that includes countries with common culture, custom, tradition, and religion. Although these countries have many common factors, but they still vary in level of income and set of faced challenges. The huge appreciation in oil prices in 1970s benefited the Middle East region as a whole. The tremendous growth and investment in the oil exporting countries had positively affected the other Journal of Money, Investment and Banking – Issue 20 (2011) 102 countries in the region through big increase in worker remittances, trade, and capital flows. (Abed and Davoodi, 2003). As a result, the banking sector in these countries has developed rapid. “Middle East Banking Sector forecast to 2013” indicates that the banking industry in the Middle East region is considered one of the world's fastest growing industries. The competitive environment of the region's commercial banks (with less direct government intervention, more regulatory requirements for better monitoring, low market concentration, better educated demanding generation, more diversity in financial products, increase demand for and offer of Islamic products, and higher entry level of foreign banks to industry) will be more effective and fundamentally stronger in the future. The UAE and Qatar will observe

rapid expansion along with other countries of the region. Since the early 1990s a number of structural changes have affected the banking industry such as globalization, deregulation and technological change. All of these changes increased competition among banks worldwide. These changes are reflected in two main forms: (1) decline in the total number of banking, (2) increase concentration in the hands of the largest banks. Banks in Middle Eastern countries, as a part of this big economy, are affected by these changes. As a result, regional differences in banks' earnings persist among these countries. Therefore, efforts in recent years try to explain the main reasons behind these differences. The overall profitability of the banking sector in Libya has improved tremendously over the last 10 years. However despite the overall good picture a critical analysis indicates that, not all banks are profitable. For example the net profit before tax of 805.5 million Libyan dinars in (CBL, 2010). The huge profitability enjoyed by the all commercial banks in Libya, indicates that there are some significant factors that influence the profitability of commercial banks. Several studies have shown that bank profitability is influenced by bank-specific factors and industry specific factors. However, these studies were based on data from other countries

and their findings may not be applied to the local Libyan banking sector. Locally, to the researcher's knowledge, no studies have been done to determine the key factors that influence the profitability of biggest commercial banks in Libya. The aim of this paper then was to close this gap in knowledge by investigating the factors. Moreover, the paper is seeks to identify the major factors affecting performance of the biggest commercial bank in Libya (Gumhouria bank). This paper is conducted as follows: the first section gives introduction and recent developments in the Banking Sector of Libya. The second section reviews briefly the literature review. The third section Methods and Resources. The fourth section Results and Discussion. Finally, the paper concludes in final section.

Recent Developments in the Banking Sector of Libya

Banks play essential role within economy due to their depositing and lending operations. Having a role of an intermediary between borrowers and lenders, banks (especially commercial banks) can positively contribute to the health and stability of economy. Therefore; most world economies, including Libya, attempt to focus their efforts on growing and stabilizing their banking sectors. Radical changes have been observed in banking sector of Libya over a phase of 40 years. Originally it undergoes lack of capital and indecision due to established political and socioeconomic calamity. Ensuing amendments were made to amount the power and function of central bank of Libya CBL from side to side State Bank of Libya Act 2005 which motivated the private sector to set up financial institutions and banks. In addition, privatization developments of banking sector which begin in 2003 provoked local investors and motivated foreign banks. Just in 2008 the central bank of Libya decided to integrate Umma bank and Gumhouria bank in a single bank under the name of Gumhouria bank. The budget became of the new bank after the merger

of 8 billion Libyan dinars, to become the second largest Libyan banks after the Libyan Foreign Bank, and the number of employees reached during the merger more than 5,800 employee, in addition, to 146 branch. It is also based on the size of the assets the bank list of the top ten banks in North Africa. Likewise figure 1 shows the boost in capital, reserves and investment of Gumhouria bank in Libya from 2006 to 2010. Investment of scheduled banks was boosted to LD. 3292 billion in 2010 which was LD. 1796 billion in 2006. Likewise capital of scheduled banks increased to LD. 1 billion in 2010 which was LD. 100 Million in 2006. Reserves were amounted to LD. 64 Million in 2010 which was LD. 10 Million in 2006.

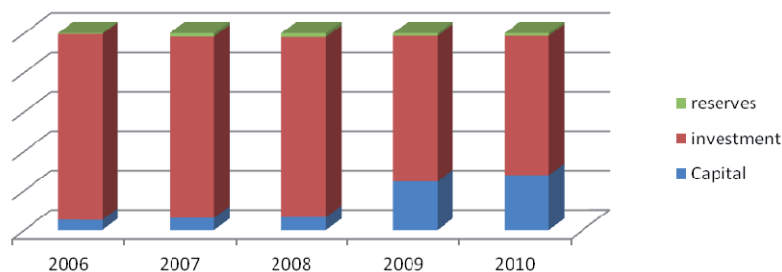
Trend Analysis of Profitability

Tab. I, reports the mean scores of ROE from 2006 to 2010. The mean of score of ROE for the Gumhouria bank was 8.98 % and rose to 27.23 % in 2010 showing an increase of 203 %.

The reported results in Tab. I, mean that the profitability of the Gumhouria bank increased from 2006 to 2010. In the banking industry, ROE of more than 27.2 % indicates good performance. Therefore this means the performance of the Gumhouria bank was comparable to international standards. This is very important for the development of Libyan economy as banks play a very important role of financial intermediation.

LITERATURE REVIEW

This section provides the overview of previous studies reviewed related to the determinants of the profitability of banks, Overall these studies propose that the determinants of profitability for bank can be divided into two groups; internal and external factors. These studies specify return on asset (ROA), return on equity (ROE) and net interest margin (NIM) as the dependent variables and considering the internal and external factors as independent variables, however, the results can



1: Development of Capital, Reserves, Investments of Gumhouria bank 2006–2010
Source: Statistical Bulletin, central Bank of Libya (December 2010)

I: The Annual Mean Scores of Profitability from 2006 to 2010

variable	2006	2007	2008	2009	2010	% Δ since 2006
ROE	8.98	17.30	19.60	13.54	27.23	203 %

be summarized as following, Pilloff and Rhoades (2002) discuss the positive relationship of the size with bank's profitability. The bank-size also affected by the operating efficiency. Molyneux and Seth (1998); Ramlall (2009); Sufian (2009) found the positive relationship of banks size and examine the bank size depends the economies of scale because the larger banks were more profitable than smaller banks. Whereas the empirical evidence also discuss the negative relationship of bank size with profitability (Koasmidou, 2008; Spathis, Koasmidou & Doumpos, 2002). Ramlall (2009) stated the positive relationship of operating efficiency and negative relationship of credit risk. The high debtor turnover period and high real interest rates for banks aggravate the banks to liquidate (Sayilgan & Yildirim, 2009). Kosmidou (2008) discuss the positive relationship of operating efficiency because if the operating efficiency is high then it gives the assurance of increment in profitability. Naceur and Goaid (2002) stated that the capital maintenance problem reflects the negative relation with profitability. The importance of capital beneficial for the portfolio composition and size of the bank. The capital highly significantly effect the profitability and empower the banks to build a strong position in market (Athanasoglou, Brissimis & Delis, 2008). The ratio to operating income to total assets shows the efficient asset exploitation and highly significant impact on profitability with positive relationship (Miller & Noulas, 1997; Sufian & Habibullah, 2009). Kunt and Detragiache (1998) stated that the weak macroeconomic environment became a reason of low economic growth and high inflation which show the economic immovability and diseconomies of scale. The economic growth and consumer price inflation positively related to profitability it also assure the empirical evidence (Alexiou & Sofoklis, 2009). In the era of Arabic countries, a study done on banks on Arab countries (Mazhar, 2003) illustrated the development and performance of foreign and domestic banks in Arab Gulf region. The author indicated that local and foreign banks in this region have did well over the past couple of years, and showed that the banking sector is well developed and with intense competition among banks. (Edris, 1997) showed the importance of

factors' selection used mainly by Kuwait business consumer when selecting domestic and foreign banks. The results reveal that the highest ranking detriment factor selection by business firm were size of bank assts, personal efficiency, banking experience, friendliness of staff, reputation, and finally the availability of finding branches overseas. Based on the above previous studies, we can conclude that these are several studies done on some Middle Eastern countries. However, no studies have been done on depth about the primary factors that affect the performance of the whole banking sector in Middle East region. In this paper, Internal Indicators: The all these variables considered independent which can influence profitability internally (Portfolio Composition, Capital Adequacy, Deposits, Size). These factors are controllable and the empirical evidence discusses all these variables and their relationship with profitability and the proportionate change occurs due to all these variables. External Indicators: The macroeconomic variables can externally influence the profitability of the banks. These indicators cannot control by the banks because their impact appears at macro level. The macroeconomic variables discuss in this paper are economic growth (GDP) and consumer price inflation (CPI). The both variables affect the profitability of banks according to the economic conditions of the any country.

METHODS AND RESOURCES

The study employ the performance indicator of Gumuhouria bank of Libya covered the period of 2000–2010. The balance sheet data is collected from Statistical Bulletin of central bank of Libya, websites of the banks and Libyan Stock market. This study will use Panel data from 2000 to 2010 of Gumuhouria banks was analyzed using multiple linear regressions method, with help of SPSS for data manipulation and inferences. Regression analysis is used to derive the relationship and significant effect of performance indicators on profitability. The Pearson correlation and Durbin Watson tests applied to deal with the problems of multicollinearity, and autocorrelation respectively.

II: Variables with their proxies and abbreviations

Symbol	factors	proxies
ROE	Return on equity	Net income / total equity
Internal factors		
CA	Capital adequacy	Total equity / total assets
GD	Growth of Deposits	Annual growth of deposits
PC	Portfolio Composition	Total Deposits/Total Assets (PC)
LNTA	Size	Logarithm of Total assets (LTA)
External factors		
GDP	Economic growth	Annual growth rate (GDP)
CPI	Consumer price inflation	Consumer inflation rate (CPI)

The descriptive statistics applies to find the mean and standard deviation of the variables.

Profitability equation:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \mu,$$

where:

Yrepresents Return on Equity for bank *i* at time *t*

X1.....Capital adequacy of bank *i* at time *t*

X2.....growth of deposits of bank *i* at time *t*

X3.....Portfolio Composition of bank *i* at time *t*

X4.....size Logarithm of Total assets of bank *i* at time *t*

X5.....economic growth

X6.....consumer price inflation

u.....Error term.

The above model signifies the profitability equation. It defines the relationship of profitability with internal factors of bank (Capital adequacy (CA), Portfolio Composition (PC), Deposits (D), Size (S), and external factors which is the macroeconomic variables (Economic Growth(GDP),and Consumer Inflation Price(CPI). The beta values ($\beta_1, \beta_2, \beta_3 \dots \beta_6$) represents the proportionate change in dependent variable due to independent variables. β_0 represents the value of x-intercept which is constant and μ represents the error term. The objective is geared towards having a full-fledged model to assess the impact of various factors on the profitability of Gumhouria bank in Libya.

RESULTS AND DISCUSSION

The current section deals with the results of the study which include the descriptive statistics, econometric results of the model, and tests for

robustness relevant for the study. The empirical evidence on the determinants of banks' profitability or Return on equity (ROE) is based on balanced panel data, where all the variables are observed for each cross-section and each time period, the descriptive statistics and correlation matrix are calculated and presented in Tab. II, and Tab. III, respectively.

Tab. III, above shows the average performance of the Gumhouria bank in terms of the factors affecting the profitability between 2006 and 2010 and the mean scores are reported in the Tab. III. The mean value of ROE of Gumhouria bank from 2006 to 2010 was 34.7%. The mean score of capital adequacy was 0.38%, the average mean value of deposits, was 38.8%. GDP which represents economic growth was 3.9%. Size of the bank that measures by Logarithm of Total assets from 2006 to 2010 was 9.6%. The mean score of CPI which represent the second external factor in this study was 0.12%. Lastly the mean score average of Portfolio composition which measures, Total Deposits/Total Assets, was 80.7%.

The model for the bank's profitability is selected on the basis of strong diagnostics and high value for the R-squared. The results are represented in Tab. V, The value for the R-squared in the model is 0.79 which endorses that 79% of the variation in the dependent variable is explained by the independent variables of the model (ROE), the 31% variation in the dependent variable remains unexplained by the independent variables of the study. The value for the F-statistic is 1.99 and is significant endorsing the validity and stability of the model relevant for the study. Secondly the D.W. statistic was about 2.017 implying that there was no serious evidence of serial correlation in the data.

III: Descriptive statistics

	Mean	Std. Deviation	N
ROE	34.7700	8.26560	10
CAPALIT	.3830	.15144	10
DEPOSITS	38.8400	72.73250	10
GDP	3.9200	.23944	10
SIZE	9.6700	.36530	10
inflation	.1200	6.90600	10
PROFITFOLIO	80.7600	5.72367	10

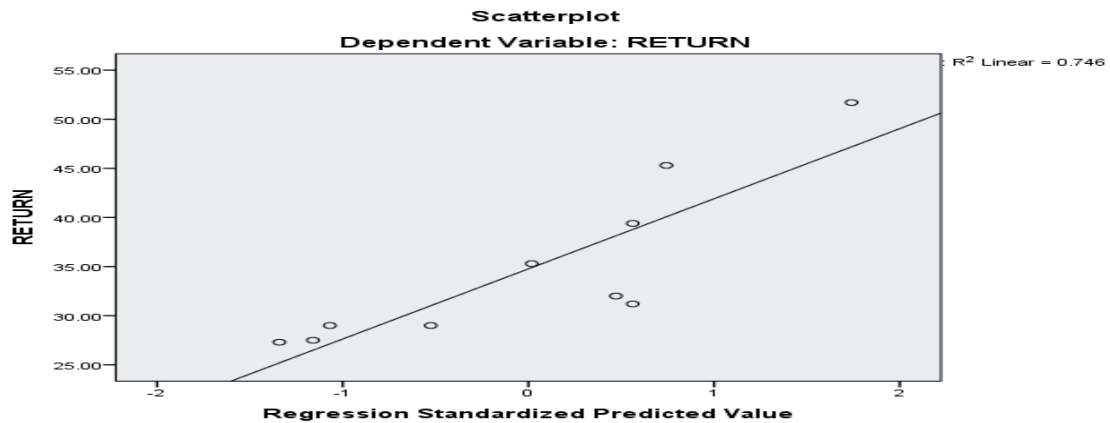
IV: Pearson correlation

		RETURN	CAPALIT	DEPOSITS	GDP	SIZE	inflation	PROFITFOLIO
Pearson Correlation	RETURN	1.000	.213	.754	.611	.497	.572	.457
	CAPALIT	.746	1.000	.183	.397	.743	.286	.630
	DEPOSITS	.754	.183	1.000	.614	.623	.530	.589
	GDP	.611	.397	.614	1.000	.859	.953	.852
	SIZE	.497	.743	.623	.859	1.000	.733	.933
	inflation	.572	.286	.530	.953	.733	1.000	.749
	PROFITFOLIO	.457	.630	.589	.852	.933	.749	1.000

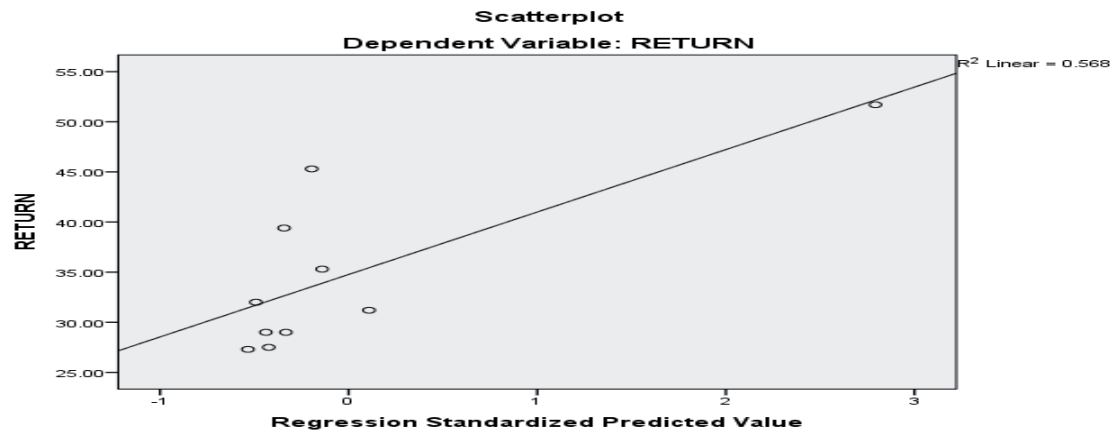
V: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.894 ^a	.799	.398	6.41443	.799	1.991	6	3	.306	2.017

a. Predictors: (Constant), PROFITFOLIO, DEPOSITS, CAPITALIT, inflation, SIZE, GDP



2: The Relationship between Profitability and Capital adequacy



3: The Relationship between Profitability and Deposits

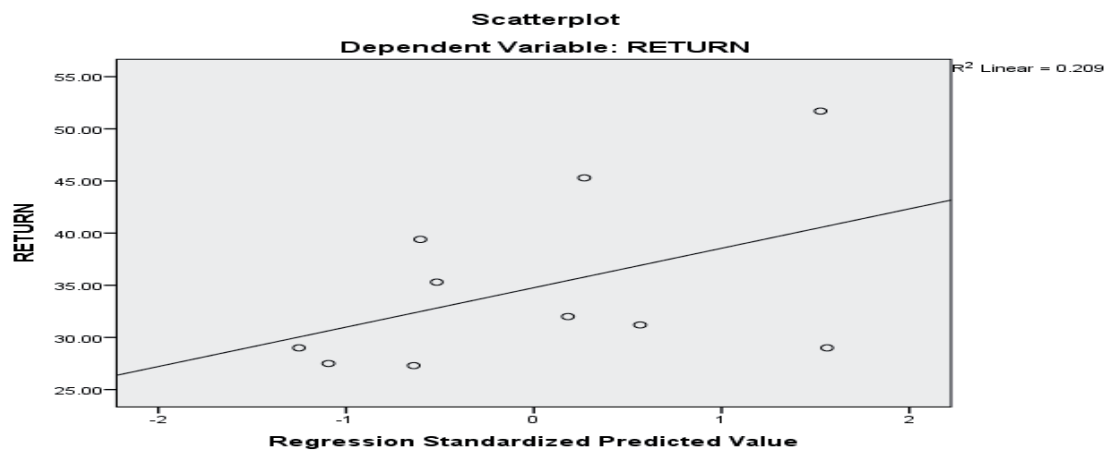
The Relationship between Profitability and Capital adequacy

The results presented in Fig. 2, indicate that the capital ratio (CAP) is positively related to return on equity (ROE), the profitability measure. The coefficient of correlations is 0.746 which indicates that the relationship is very strong, meaning that well-capitalized banks experience higher returns, this result is consistent with the study of Bourke (1989), and he found an important positive relation between the capital adequacy and profitability. He illustrated that higher the capital ratio, more the bank will be profitable. Demirguc- Kunt and Huizinga (1999) conduct a more comprehensive study which examines the determinants of banking performance for 80 countries, both developed and developing, during the period 1988–1995. They conclude that foreign banks have higher profitability than domestic banks in developing

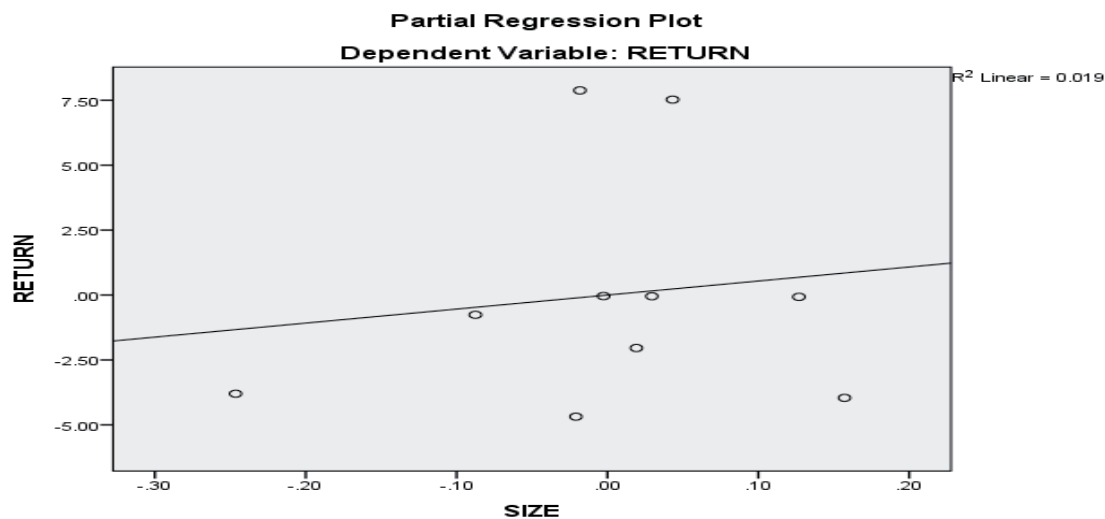
countries, while the opposite holds in developed countries. Nevertheless, their overall results show support for the positive relationship between the capital ratio and financial performance.

The Relationship between Profitability and Deposits

The results presented in Fig. 3, indicate that the growth of deposits (GD) is positively related to return on equity (ROE), the profitability measure. The coefficient of correlations is 0.568 which indicates that the relationship is strong and positively. It suggests that larger banks deposits achieve higher ROE, it shows that deposits have positive impact on profitability and banks depending on deposits for funds can achieve better return on equity. This result is consistent with the results of previous research (Abu Bakar, N. & Tahir, I. M. (2009).



4: The Relationship between Profitability and Portfolio Composition



5: The Relationship between Profitability and Size

The Relationship between Profitability and Portfolio Composition

The results presented in Fig. 4, indicate that the portfolio composition (PC) is positively related to return on equity (ROE), the profitability measure, the coefficient of correlations is 0.209 which indicates that the relationship may not be very strong. The positive relation of portfolio composition with profitability is in harmony with the findings of (Naceur&Goaied, 2001; Al-Tamimi, 2005).

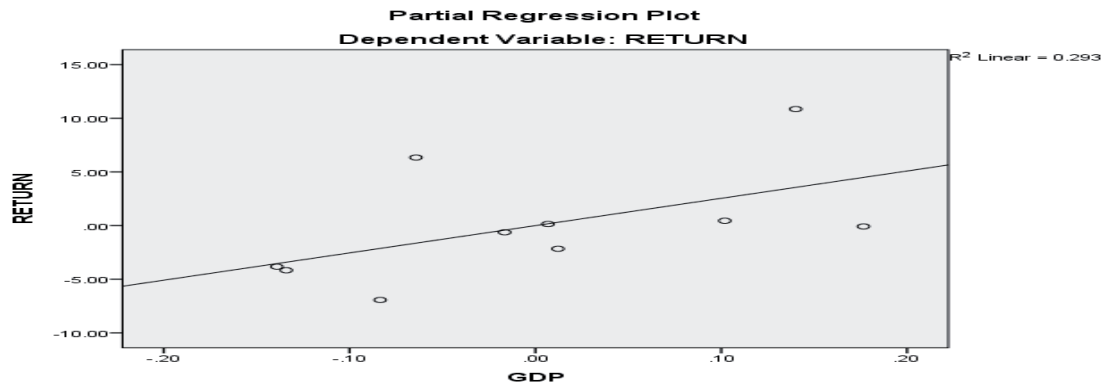
The Relationship between Profitability and Size

Fig. 5, presents the relationship between size of the bank measured by Logarithm of Total assets (LTA) and profitability. The coefficient of correlations is 0.019 which indicates that the relationship is very weak but it's positively, Pilloff and Rhoades (2002) discuss the positive relationship of the size with bank's profitability. The bank-size also affected by the operating efficiency. Molyneux

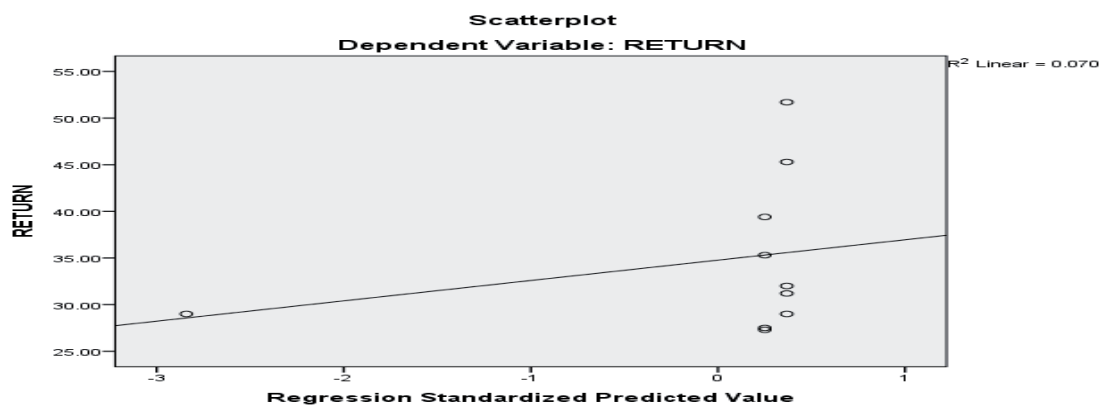
and Seth (1998); Ramlall (2009); Sufian(2009) found the positive relationship of banks2 size and examine the bank size depends the economies of scale because the larger banks were more profitable than smaller banks. Whereas the empirical evidence also discuss the negative relationship of bank size with profitability (Koasmidou, 2008).

The Relationship between Profitability and economic growth

Fig. 6, shows a correlation coefficient of 0.293 between profitability and GDP, indicating a positive correlation between the two variables, however, Positive relation of economic growth (GDP) is in line with (Alexiou & Sofoklis, 2009), Demirguc-Kunt and Huizinga (1999) 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. The empirical literature usually resorts towards two versions of



6: The Relationship between Profitability and economic growth



7: The Relationship between Profitability and Consumer price Index

GDP. First, there is cyclical output which basically reflects the deviation of GDP from an HP-Filtered GDP. Second, there is the use of GDP per capita to cater for the level of economic development.

The Relationship between Profitability and Consumer price Index

The relation between profitability and consumer price index is shown in Fig. 7. It indicates that the coefficient of correlations is 0.070 which means that the relationship is very weak but positively. Revell (1979) introduces the issue of the relationship between bank profitability and inflation. He notes that the effect of inflation on bank profitability depends on whether banks' wages and other operating expenses increase at a faster rate than inflation. The question is how mature an economy is so that future inflation can be accurately forecasted and thus banks can accordingly manage their operating costs. In this vein, Perry (1992) states that the extent to which inflation affects bank profitability depends on whether inflation expectations are fully anticipated. An inflation rate fully anticipated by the bank's management implies that banks can appropriately adjust interest rates in order to increase their revenues faster than their costs and thus acquire higher economic profits. Most studies (including those by Bourke (1989) and Molyneux and Thornton (1992) have shown

a positive relationship between either inflation profitability.

Internal and external factors affect the profitability of Gumhouria bank significantly in Libya

The multiple linear regression and t-statistic results used to test this hypothesis are reported in Tab. VI. The coefficient of (CA) is 58.2 with a t-statistic of 1.521 in the main sample, The positive coefficients mean an increase in capital leads to an increase in profitability and the high t-statistic value indicates that the impact is statistically significant level. (GD) has a positive beta of 0.115 with a t-statistic of 2.449 The positive coefficients mean an increase in total deposits leads to an increase in profitability and the high t-statistic value indicates that the impact is statistically acceptable significant.

The effect of portfolio composition (CP) to ROE is 0.183 with t-value of 0.167 in the sample, this means an increase in liquidity leads to an increase in profitability. This impact is significant is acceptable. However the coefficient is weak, implying a weak positive impact. The results for Size (LTM) in the a sample has a negative impact of -49.3 with t-value Of (-1.366), this means poor asset quality leads to lower profitability to Gumhouria bank, This impact is significant at acceptable level. Finally, the impact of GDP is 70.7 with t-value 1.227 in the sample.

VII: Regression Results for the internal and external factors on Profitability

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	222.872	195.648		1.139	.337	-399.767	845.511
CAPALIT(CA)	58.203	38.259	1.066	1.521	.226	-63.555	179.962
DEPOSITS(GD)	.115	.047	1.013	2.449	.092	-.034	.265
1 GDP	70.753	57.655	2.050	1.227	.307	-112.729	254.236
SIZE(LTA)	-49.364	36.150	-2.182	-1.366	.265	-164.411	65.682
Inflation(CPI)	-.631	1.282	-.527	-.492	.656	-4.712	3.450
PROFITFOLIO(PC)	.183	1.094	.127	.167	.878	-3.666	3.300

a. Dependent Variable: RETURN

This means an increase GDP leads to increased profitability, this impact is significant at acceptable level. But the consumer price index (CPI) has a negative beta of -0.631 with t-value -0.492 , this means an increase of CPI leads to poor profitability.

CONCLUSION

A profitable banking sector is better able to withstand negative shocks and contribute to the stability of the economy. The aim of this study was to quantify factors affecting the profitability of Gumhouria banks in Libya. This study used Panel data from 2000 to 2010. Data was analyzed using multiple linear regressions method with help of

SPSS. The results of this study indicate that, the ROE, indicator represent more than 27.2 % which indicates good performance, as well as and the result of the model of the study show that Gumhouria bank is influence by Portfolio Composition, Capital Adequacy, Deposits, and macroeconomic variable (GDP). Even though other variables, such as bank size and inflation also have significant effect on profitability but its influence are very weak. Future research need to be done in order to improve the results of this study that among other things can be done by increasing the number of observations, both the data time series and cross section. Also some other profitability indicators as ROA should add.

SUMMARY

The main objective of this paper is to provide the major factors that affect the Gumhouria banks' performance in the Libya. In my study, I have selected 6 variables and analyze them according to factors based on their importance to banks' performance, including internal and external factors. The balance sheet data is collected from Statistical Bulletin of central bank of Libya, websites of the Gumhouria bank and Libyan Stock market. This study used Panel data from 2000 to 2010. Data was analyzed using multiple linear regressions method with help of SPSS. The results indicated that all internal factors (Portfolio Composition, Capital Adequacy, Deposits) are important and have big influence on bank's profitability with exception of Size has very weak relationships on profitability, but also positive correlated. The external factor is the macroeconomic variables (GDP, CPI) both of them influenced positively the bank's profitability but CPI recorded very weak relationships on profitability. Management of Gumhouria bank should concentrate on all variables in the two factors, specially the variables in first factor as bank size, in order to grow and stabilize worldwide.

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