Determinants of Profitability of Listed Commercial Banks in Developing Countries: Evidence from Malawi

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Abstract

The study of profitability is important in assessing the health of organisations. However, profitability of the banking sector is particularly crucial as the soundness of the sector is closely related to the soundness of the entire economy. The current study attempts to evaluate the determinants of profitability of listed commercial banks in developing countries specifically focusing on Malawi during the period 2009-2012 using internal-based and external (market)-based profitability measurements. The study employed correlation and multivariate regression analysis. Return on Assets (ROA) and Earnings Yield (EY) are used as proxies of internal and external profitability respectively. The results of the regression analysis suggest that bank size, liquidity and management efficiency have a statistically significant impact on ROA however capital adequacy has insignificant effect. On the other hand results suggest that earnings yield is significantly influenced by bank size, capital adequacy and management efficiency, whereas liquidity is found to have insignificant influence on Earnings yield.

Keywords: Commercial banks, Malawi, Return on Assets (ROA), Earnings Yield (EY)

Introduction

Commercial banks play a crucial role in the economic resource allocation of countries by basically channelling funds from depositors to investors continuously (Ongore and Kusa, 2013). They offer all important services of providing deposit and loan facilities for personal and corporate customers, making credit and liquidity available in adverse market conditions, and providing access to the nation's payments systems (Handley-Schachler et al., 2007). Besides, banks are also the ultimate vendors of transmitting effective monetary policy of the central bank of the economy thus in a way they share the responsibility of stabilizing economy (Siddiqui and Shoaib, 2011). The soundness of banking sector is very critical to the health of the entire economy (Sufian and Chong, 2008). In agreement Katrodia (2012) posited that they are closely related. On the other hand, the soundness of the banks to a larger extent depends on their financial performance which indicates the strength and weakness of a particular bank (Makkar and Singh, 2013). Financial performance is evaluated by the profitability.

Generally the sustainability of the banks depends on its profitability. This is the case because the banks must generate necessary income to cover their operational cost incurred in the due course (Ongore and Kusa, 2013). Furthermore it is out of the profits that shareholders get their rewards for their investment, which also encourages additional investment (Ongore and Kusa, 2013). Basically companies remain in operation because they expect to make profits; hence once that expectation is confirmed unattainable, the most rational decision is to exit the business (Ayanda et al., 2013). Ongore and Kusa (2013) asserted that profit is the ultimate goal of commercial banks, thus all the strategies designed and activities performed are meant to realize this grand objective. However, Ongore and Kusa (2013) clarified that this does not mean that commercial banks have no other goals in fact they also have additional social and economic goals.

According to Ayanda et al. (2013) the term profitability refers to the ability of the business organization to maintain its profit year after year. Profitability of a bank according to Podder (2012) is the efficiency of a bank at generating earnings. Profitability apart from ensuring the sustainability of the companies it has also wider implications of the economy as a whole. According to Ayanda et al. (2013) generally profitability of organisations contributes to the economic development of the nation by way of providing additional employment and tax revenue to government. Ayanda et al. (2013) further state that profitability contribute the income of the investors by having a higher dividend and thereby improve the standard of living of the people. On the other hand, however in relation to the banks poor profitability can lead to banking failure and crisis which have dire negative repercussions on the economic growth (Ongore and Kusa, 2013) and the wellbeing of the people.

Current study is aimed at investigating the determinants of internal and market profitability of the commercial banks. The study is essential for the wellbeing of the individual banks and the entire economy. According to Ayanda et al. (2013):

> "The study of profits is important not only because of the information it provides about the health of the economy in any given year, but also because profits are a key determinant of growth and employment in the medium-term. Changes in profitability are an important contributor to economic progress via the influence profits have on the investment and savings decisions of companies. This is because a rise in

profits improves the cash flow position of companies and offers greater flexibility in the source of finance for corporate investment (i.e. through retained earnings). Easier access to finance facilitates greater investment which boosts productivity, productive capacity, competitiveness and employment."

The study targets the banks due to their critical role to the soundness of the entire economy. So far to the best knowledge of the researcher no study of this nature has being carried out in Malawi. Furthermore, according to Almazari (2012) banks and other financial institutions are a unique set of business firms whose assets and liabilities, regulatory restrictions, economic functions and operating make them an important subject of research, particularly in the conditions of the emerging financial sectors. Additionally, fewer studies have looked at bank performance in developing economies (Ayanda et al., 2013). Besides, Flamini et al. (2009) recommended future research focused on country-specific studies that would provide country level policy conclusions. Knowledge of the underlying factors that influence the financial sector's profitability is essential not only for the managers of the banks, but also for numerous stakeholders such as the central banks, bankers associations, governments, and other financial authorities (Sufian and Chong, 2008). The remainder of the paper is structure as follows. The second section presents a review of the prior studies on profitability and its indicators and determinants, which is followed by section three, discusses the research methodology employed. Section four presents the results of the study and ensuing discussion and finally section five gives the concluding remarks.

Literature review
Financial performance
There are several studies that have been carried out to evaluate the profitability generally and more specifically the determinants of profitability of the banks. These studies relate both to conventional and Islamic banks. However much of these studies were done in developed countries, less on developing ones (Ayanda et al., 2013) and none on the banking sector of Malawi.

Kumbirai and Webb (2010) investigated the performance of South Africa's commercial banking sector for the period 2005-2009. They employed financial ratios to measure the profitability, liquidity and credit quality performance of five large South African based commercial banks. The study found that overall bank performance increased considerably in the first two years of the analysis. A significant change in trend is noticed at the onset of the global financial crisis in 2007, reaching its peak during 2008-2009. This resulted in falling profitability, low liquidity and deteriorating credit quality in the South African Banking sector.

Still within Africa, Ayanda et al. (2013) endeavoured to study profitability determinants in the banking sector of the Nigerian economy however they used First Bank of Nigeria Plc only as a case study. Results revealed that contrary to views of some authors, Bank Size (Natural Logarithm of Total Asset and Number of Branches) and Cost Efficiency did not significantly determine bank profitability in Nigeria. However, Credit Risk (Loan Loss Provision-Total Assets) and Capital Adequacy (Equity-Total Assets) were found to be significant drivers which affected bank profitability both in the long run and short run respectively. Also, while Liquidity affected bank profitability in the short run, Labour efficiency (Human Capital ROI and Staff Salaries-Total Assets) only affected bank profitability in the long run. But as for the external or macroeconomic variables which determined bank profitability, only Broad Money Supply growth rate was found to be a significant driver both in the long run and in the short run.

Another African study was carried out in Kenya by Ongore and Kusa (2013). Study was in recognition of scantiness of studies on moderating effect of ownership structure on bank performance. The results highlighted that bank specific factors significantly affect the performance of commercial banks in Kenya, except for liquidity variable. On the other hand, the overall effect of macroeconomic variables was inconclusive at 5% significance level. Besides, the moderating role of ownership identity on the financial performance of commercial banks was found to be insignificant. Thus, it was concluded that the financial performance of commercial banks in Kenya is driven mainly by board and management decisions, while macroeconomic factors have insignificant contribution.

Almazari (2012) attempted to measure the financial performance of the Jordanian Arab commercial bank for the period 2000-2009 by using the DuPont system of financial analysis which is based on analysis of return on equity model. The return on equity model disaggregated performance into three components: net profit margin, total asset turnover, and the equity multiplier. The results indicated that the financial performance of Arab Bank was relatively steady and reflected minimal volatility in the return on equity. Net profit margin and total asset turnover exhibited relative stability for the period from 2001 to 2009.The equity multiplier also revealed stability for the period from 2001-2005 and the ratios declined from 2006-2009 which indicated that the Arab bank had less financial leverage in the recent years, which means the bank relied less on debt to finance its assets.

Alkhatib and Harsheh (2012) empirically examined the financial performance of five Palestinian commercial banks listed on Palestine securities exchange. Financial performance was measured by using three indicators; Internal–based performance measured by Return on Assets, Market-based performance measured by Tobin's Q model (Price/Book value of Equity) and Economic–based performance measured by Economic Value add. The study used the correlation and multiple regression analysis of annual time series data from 2005-2010 to capture

the impact of bank size, credit risk, operational efficiency and asset management on financial performance measured by the three indicators, and to create a good-fit regression model to predict the future financial performance of these banks. The study rejected the hypothesis claiming the existence of statistically insignificant impact of bank size, credit risk, operational efficiency and asset management on financial performance of Palestinian commercial banks.

Makkar and Singh (2013) carried out a comparative analysis of the financial performance of Indian commercial banks considering a sample of 37 banks (22 public sector banks and 15 private sector banks) for the period from 2006-07 to 2010-11. Using t-test, the results revealed significant difference in the capital adequacy, asset quality and earning capacity of public and private sector banks in India. On the other hand they found no significant difference in the management, liquidity position and sensitivity to market risk of the two different banking groups. Thus it was concluded that on an average, there was no statistically significant difference in the financial performance of the public and private sector banks in India.

In relation to Islamic banks, Bashir (2003) analysed the impact of bank characteristics and the overall financial environment on the performance of Islamic banks. The study used bank level data to examine the performance indicators of Islamic banks across eight Middle Eastern countries between 1993 and 1998. Furthermore, a variety of internal and external banking characteristics were used to predict profitability and efficiency. Controlling for macroeconomic environment, financial market structure, and taxation, the results indicated that high capital-to-asset and loan-to-asset ratios lead to higher profitability. The results also indicate that foreign-owned banks are likely to be profitable. Furthermore, holding all other things equal, the regression results showed that implicit and explicit taxes affect the bank performance and profitability negatively while favourable macroeconomic conditions impact performance measures positively.

Haron (2004) also investigated the determinants of profitability on Islamic banks. The study found that internal factors such as liquidity, total expenditures, funds invested in Islamic securities, and the percentage of the profit-sharing ratio between the bank and the borrower of funds are highly correlated with the level of total income received. Similar effects were found for external factors such as interest rates, market share and size of the bank. Other determinants such as funds deposited into current accounts, total capital and reserves, the percentage of profit-sharing between bank and depositors, and money supply also play a major role in influencing the profitability of Islamic banks.

Profitability indicators and determinants

Generally, financial performance is measured by properly establishing the association between the items of the balance sheet and profit and loss account (Makkar and Singh, 2013). The process of establishing relevant association is referred as financial analysis which involves calculating of financial ratios, thus it also called ratio analysis. There are several ratios that can be computed in assessing profitability. According to Ongore and Kusa (2013) return on assets (ROA) is one of the major ratios that indicates the profitability of a bank. It measures the ability of the bank management to generate income by utilising company assets at their disposal (Davydenko, 2011; Ongore and Kusa, 2013). In other words, the ratio indicates how much net income is generated on each unit of assets thus the higher the ROA, the more the profitable the bank (Kumbirai and Webb, 2010; Davydenko, 2011). The ratio shows how efficiently the resources of the company are used to generate the income (Ongore and Kusa, 2013). The problem of ROA is that it excludes off-balance sheet items of the bank creating a positive bias in evaluating bank performance (Davydenko, 2011).

Another related ratio is called return on equity (ROE) which measures how much profit a company earned compared to the total amount of shareholder equity invested or found on the balance sheet. It is the rate of return to shareholders or the percentage return on each unit of equity invested in the bank (Kumbirai and Webb, 2010). A business that has a high return on equity is more likely to be one that is capable of generating cash internally (Ongore and Kusa, 2013). According to Kalluci (2011) it is better to look at both ROA and ROE, citing that even though they differ from each other and express different things, they both remain two main indicators of management efficiency towards generating income from the money invested by the shareholders and the total investments made in assets, as well. However, of the two, extant literature favours of ROA to ROE (Davydenko, 2011). One of the stated reasons is that ROE does not provide an indication for the bank's financing through borrowing, whereas ROA does (Kalluci, 2011), thus ROE gives limited insight about the bank profitability and performance (Alkhatib and Harsheh, 2012). The study therefore employs ROA as the proxy of internal profitability.

Both ROA and ROE uses the accounting book values however they can be adjusted to take into account the market values through the calculation of earnings yield found by earnings per share divided by the share price. According to Sangoi (2011) earnings yield is an important indicator of future profitability of the company per the assessment of the market. A high earnings yield indicates that the market is assuming a lower future growth in profits and a low EY indicates expectation by the market for high profit growth for an extended period of time. The study employs earnings yield as the proxy for external profitability.

In relation to the determinants of profitability Ayanda et al. (2013) categorised them into two namely;

endogenous (internal) and exogenous (external) factors. According to Ayanda et al. (2013) internal factors refers to the profitability drivers that can be influenced by the bank's management decisions. On the other hand, external factors are beyond the control of a bank's management representing events outside the influence of the bank. It is however recognised that the management can anticipate changes in the external environment and try to position the institution to take advantage of anticipated developments. This study focuses on the internal factors. Ongore and Kusa (2013) elucidated that the internal factors are within the scope of the bank to manipulate them and that they differ from bank to bank. They provide example to include capital size, size of deposit liabilities, size and composition of credit portfolio, interest rate policy, labour productivity, and state of information technology, risk level, management quality, bank size, ownership and the like. Alkhatib and Harsheh (2012) recognised also that some principal factors to improve financial performance for financial institutions include the bank's size, its assets management, leverage ratio, operational efficiency ratio, its portfolio composition, and credit risk. The current study evaluates four factors; bank size, liquidity, capital adequacy and management efficiency in determination of the factors that influences profitability of the banks in Malawi.

Research methodology
Sampling and data collection
The study aimed at investigating factors influences the internal and external profitability of the banks, thus it sampled commercial banks that are listed on Malawi Stock Exchange (MSE) as it were palpable to the measurement of both their internal and market profitability. There were twelve banks operating in Malawi by end of 2012 of which four were listed on the MSE. **TABLE 1** listed the all the banks in Malawi and there listing status. The listed banks happen to be most profitable in absolute terms. Banking sector in Malawi is dominated by two banks namely National Bank of Malawi and Standard Bank Limited in terms of the volume of total assets, deposits, gross loans and capital base (Reserve Bank of Malawi, 2011). Reserve Bank of Malawi (2011) reported National Bank of Malawi and Standard Bank Limited combined constituted 45.0 percent of the industry's aggregate assets (49.0 percent in 2010), 51.0 percent of total capital (53.0 percent in 2010), 45.4 percent of total deposits (52.0 percent in 2010) and 44.2 percent of total gross loans (46.0 percent in 2010). Both of these banks are listed, hence included in the sample.

Consistent with (Sufian and Chong, 2008; Ayanda et al., 2013; Ongore and Kusa, 2013), the study used secondary data from the published financial statements of the sampled banks for 2009 to 2012 to estimate the relevant ratios and coefficients. It must be noted that all the listed companies on MSE apply international financial reporting standards (IFRSs) and their financial statements are audited by the Big 4.

Model specification
The study employs correlation and multivariate regression analysis. The dependent variables used were Return on Asset (ROA) and Earnings yield (EY). ROA was used as an internal profitability indicator (Alkhatib and Harsheh, 2012; Podder, 2012) and the Earnings yield as a market profitability indicator. The four determinants employed were bank size, liquidity, capital adequacy and management efficiency. The models used were:
Model I:

$$ROA = \alpha_0 + \alpha_1 SIZE + \alpha_2 LIQUIDITY + \alpha_3 CAPITAL + \alpha_4 ME + e$$

Model II:

$$EY = \beta_0 + \beta_1 SIZE + \beta_2 LIQUIDITY + \beta_3 CAPITAL + \beta_4 ME + e$$

Where: A_0, β_0 = Intercept coefficient
α_{1-4}, β_{1-4} = Coefficient for each of the independent variables
SIZE = Bank size
LIQUIDITY = Liquidity
CAPITAL = Capital Adequacy
ME = Management Efficiency
e = error term
ROA = Return on Assets
EY = Earnings Yield
Consistent with extant literature, the variables were calculated as follows:
ROA = profit before tax/total assets
Earnings Yield = Earnings per share/Stock price
Bank size = Log (total assets)
Liquidity = Cash and cash equivalent/total assets
Capital adequacy = Equity/total assets

Management efficiency = Revenue/profits before tax

Findings and discussion

Trend analysis of the profitability of the commercial banks

FIGURE 1 presents the results of the trend analysis of the profitability of the sampled commercial banks. The results indicate that the average ROA marginally declined in 2010 and 2011 however the rate grew in 2012 beyond the previous rates. The growth of the rate of ROA reflects improvement of the ability of a bank's management to generate profits from the bank's assets (Athanasoglou et al., 2005). On the other side earnings yield line gives an upward trend over the four year period. The earnings yield has grown of the period from 9.9% in 2009 to 14.5% in 2012. This indicates that the market is expecting lower growth potential in profits of the sampled banks.

TABLE 2 presents the mean, standard deviation and equation for the trend line for ROA and earnings yield over the period of study. Both of the equation of the trend lines indicates an increasing trend over the four year period. The results indicate that the upward trend internal profitability (ROA) has not resonated on the market as seen by continued upward trend of earnings yield suggesting expected low future growth of profitability.

Relationship between ROA and its determinants for Model I

TABLE 3 presents the results of the correlation analysis relating to Model I. The results suggest positive and significant correlations between ROA with bank size (+0.548) and capital adequacy (+0.559). A positive but insignificant correlation is indicated with liquidity (+0.458). Management efficiency is found to be significantly negatively related with ROA (-0.734). Furthermore in **TABLE 6**, all the values of VIF (Collinearity statistics) are less than 5, implying non-existence of the problem of multicollinearity among the independent variables (Alkhatib and Harsheh, 2012).

Regression results Model I

TABLE 4 shows an adjusted R Square of 79% indicating that 79% of the variation of ROA can be explained by the independent variables: bank size, liquidity, capital adequacy and management efficiency. The results indicate a strong explanatory power of the whole regression model.

TABLE 6 presents the results of the assessment of significance of each independent variable. The results indicate that bank size, liquidity and management efficiency are significant determinants as their p-values are less than 0.05, however capital adequacy was found to have insignificant influence (p-value $0.191 > 0.05$).

Relationship between Earnings yield and its determinants for Model II

TABLE 7 presents the results of the correlational analysis for Model II. The results suggest a strong positive significant relationship between earnings yield with management efficiency at 1% level. On the other hand Bank size (+0.222) and liquidity (+0.144) exhibited weak positive relationship. Capital adequacy (-0.495) exhibited negative relationship with Earnings yield. How in all the three cases the relationship was insignificant as their p-values were greater than 0.05. Furthermore, **TABLE 10** indicates that all the values of VIF (Collinearity statistics) are less than 5, implying non-existence of the problem of multicollinearity among the independent variables (Alkhatib and Harsheh, 2012).

Regression results for Model II

TABLE 9 gives an adjusted R Square of 63.8% suggesting that 63.8% of the variation of Earnings Yield can be explained by the independent variables: Bank Size, Liquidity, Capital Adequacy and Management Efficiency. This is also an indication of the strong explanatory power of the regression model.

On the other hand, **TABLE 10** indicates that bank size, capital adequacy and management efficiency significantly affect earnings yield as their p-values are less than 0.05, however liquidity was found to have insignificant impact (p-value $0.145 > 0.05$).

Conclusion

The role of banks is central in financing economic activity in general and different segments of the market in particular (Athanasoglou et al., 2005). Athanasoglou et al. (2005) further posited that a sound and profitable banking sector is better able to withstand negative shocks and contribute to the stability of the financial system, thus, the determinants of bank performance have attracted the interest of academic research as well as of bank management, financial markets and bank supervisors. The study was an attempt to understand the determinants of internal profitability as measured by return on assets (ROA) and external profitability as measured by earnings yield (EY). The results suggest that bank size, liquidity and management efficiency significantly affects ROA, on the other hand capital adequacy has been found to have insignificant effect. In relation to earnings yield, results suggest that it is significantly affected by bank size, capital adequacy and management efficiency. Liquidity on the other hand was found to exert insignificant effect on earnings yield.

The evidence provide by the study contributes to decision-making of the banks and investors. To the banks, the study highlights to the management of the important profitability factors and this will help them to pay more attention to the relevant activities that exert potential and strong impact on performance of the banks (Alkhatib

and Harsheh, 2012). According to Ayanda et al. (2013) viewing evidence about the drivers of banks profitability helps the understanding of which economic and financial factors are critical to track and analyze in order to attain operational success. Such knowledge is useful in helping the bank managers formulate future policies aimed at improving the profitability of the banking sector (Sufian and Chong, 2008). On the other hand the findings help individuals or investors in recognising the drivers of profitability and making relevant analysis of financial statements in order to make informed equity investment decisions (Ayanda et al., 2013).

The limitations of the study include the fact that it was limited to listed commercial banks. Furthermore it only evaluated four internal drivers. Future studies should extend to all the commercial banks including unlisted ones. Besides, should evaluate more variables including external profitability determinants, such as inflation, GDP growth rate, exchange rate etc. Considerations may also be on examining the differences in the determinants of profitability between small and large or high and low profitability banks (Sufian and Chong, 2008).

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IISTE

TABLE 1: List of commercial banks operating in Malawi as at December 2012		
No.	**Names of the Banks**	**Listing status**
1	CDH Investment Bank*	Unlisted
2	ECO Bank	Unlisted
3	FDH Bank	Unlisted
4	First Merchant Bank	Listed
5	INDE Bank	Unlisted
6	International Commercial Bank**	Unlisted
7	Malawi Savings Bank	Unlisted
8	National Bank of Malawi	Listed
9	NBS Bank	Listed
10	NED Bank	Unlisted
11	Opportunity Bank	Unlisted
12	Standard Bank	Listed
* Started operating in 2012		
** It was absorbed by First Merchant Bank in 2013		

TABLE 2: Mean, Standard deviation and equation for trend line			
Variable	**Mean**	**Standard deviation**	**Equation for trend line**
Return on Assets (ROA)	6.2%	1.9%	$y = 0.004x + 0.0522$
Earnings Yield (EY)	12.5%	3.6%	$y = 0.0154x + 0.0867$

TABLE 3: Correlation matrix for Model I						
		Return on Assets	**Bank Size**	**Liquidity**	**Capital Adequacy**	**Management efficiency**
Return on Assets	Pearson Correlation	1	.548[*]	.458	.559[*]	-.734[**]
	Sig. (2-tailed)		.028	.075	.024	.001
	N	16	16	16	16	16
Bank Size	Pearson Correlation	.548[*]	1	.016	.290	-.245
	Sig. (2-tailed)	.028		.955	.276	.361
	N	16	16	16	16	16
Liquidity	Pearson Correlation	.458	.016	1	.075	-.131
	Sig. (2-tailed)	.075	.955		.781	.630
	N	16	16	16	16	16
Capital Adequacy	Pearson Correlation	.559[*]	.290	.075	1	-.466
	Sig. (2-tailed)	.024	.276	.781		.069
	N	16	16	16	16	16
Management efficiency	Pearson Correlation	-.734[**]	-.245	-.131	-.466	1
	Sig. (2-tailed)	.001	.361	.630	.069	
	N	16	16	16	16	16
*. Correlation is significant at the 0.05 level (2-tailed).						
**. Correlation is significant at the 0.01 level (2-tailed).						

TABLE 4: Model Summary for Model I									
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Change Statistics**				
					R Square Change	**F Change**	**df1**	**df2**	**Sig. F Change**
1	.921[a]	.848	.792	.89382	.848	15.321	4	11	.000
a. Predictors: (Constant), Management efficiency, Liquidity, Bank Size, Capital Adequacy									

TABLE 5: ANOVA[b] for Model I						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	48.962	4	12.240	15.321	.000[a]
	Residual	8.788	11	.799		
	Total	57.750	15			
a. Predictors: (Constant), Management efficiency, Liquidity, Bank Size, Capital Adequacy						
b. Dependent Variable: Return on Assets						

TABLE 6: Coefficients[a] for Model I								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-15.921	6.753		-2.358	.038		
	Bank Size	4.100	1.401	.363	2.928	.014	.900	1.111
	Liquidity	.132	.042	.371	3.129	.010	.982	1.018
	Capital Adequacy	.105	.075	.189	1.393	.191	.750	1.334
	Management Efficiency	-.555	.147	-.508	-3.770	.003	.761	1.315
a. Dependent Variable: Return on Assets								

TABLE 7: Correlation matrix for Model II						
		Earnings Yield	Bank Size	Liquidity	Capital Adequacy	Management efficiency
Earnings Yield	Pearson Correlation	1	.222	.144	-.495	.654[**]
	Sig. (2-tailed)		.408	.596	.051	.006
	N	16	16	16	16	16
Bank Size	Pearson Correlation	.222	1	.016	.290	-.245
	Sig. (2-tailed)	.408		.955	.276	.361
	N	16	16	16	16	16
Liquidity	Pearson Correlation	.144	.016	1	.075	-.131
	Sig. (2-tailed)	.596	.955		.781	.630
	N	16	16	16	16	16
Capital Adequacy	Pearson Correlation	-.495	.290	.075	1	-.466
	Sig. (2-tailed)	.051	.276	.781		.069
	N	16	16	16	16	16
Management efficiency	Pearson Correlation	.654[**]	-.245	-.131	-.466	1
	Sig. (2-tailed)	.006	.361	.630	.069	
	N	16	16	16	16	16
**. Correlation is significant at the 0.01 level (2-tailed).						

TABLE 8: Model Summary for Model II									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.857[a]	.734	.638	2.18686	.734	7.597	4	11	.003
a. Predictors: (Constant), Management efficiency, Liquidity, Bank Size, Capital Adequacy									

TABLE 9: ANOVA[b] for Model II						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	145.332	4	36.333	7.597	.003[a]
	Residual	52.606	11	4.782		
	Total	197.938	15			
a. Predictors: (Constant), Management efficiency, Liquidity, Bank Size, Capital Adequacy						
b. Dependent Variable: Earnings Yield						

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-36.874	16.523		-2.232	.047		
	Bank Size	9.989	3.427	.478	2.915	.014	.900	1.111
	Liquidity	.162	.103	.246	1.569	.145	.982	1.018
	Capital Adequacy	-.364	.184	-.355	-1.976	.074	.750	1.334
	Management efficiency	1.288	.360	.638	3.578	.004	.761	1.315

TABLE 10: Coefficients[a] for Model II

a. Dependent Variable: Earnings Yield

Raw data for Regression analysis

| Year	Bank	ROA	Earnings Yield	Log (Total assets)	Liquidity	Management efficiency	Capital adequacy
2009	1	7%	11%	4.88	15%	2.20	16%
	2	5%	6%	4.59	13%	2.68	18%
	3	4%	11%	4.47	21%	4.29	9%
	4	7%	11%	4.69	23%	2.38	17%
2010	1	6%	12%	4.92	16%	2.45	16%
	2	5%	9%	4.70	11%	2.71	16%
	3	5%	15%	4.59	24%	3.54	9%
	4	7%	13%	4.74	21%	2.87	18%
2011	1	6%	14%	4.96	16%	2.80	17%
	2	5%	11%	4.78	23%	2.83	16%
	3	5%	19%	4.75	20%	3.41	12%
	4	7%	11%	4.88	11%	2.23	16%
2012	1	8%	14%	5.11	23%	2.23	17%
	2	9%	10%	4.72	30%	2.31	23%
	3	2%	21%	4.78	16%	9.53	12%
	4	10%	13%	5.07	26%	2.07	14%
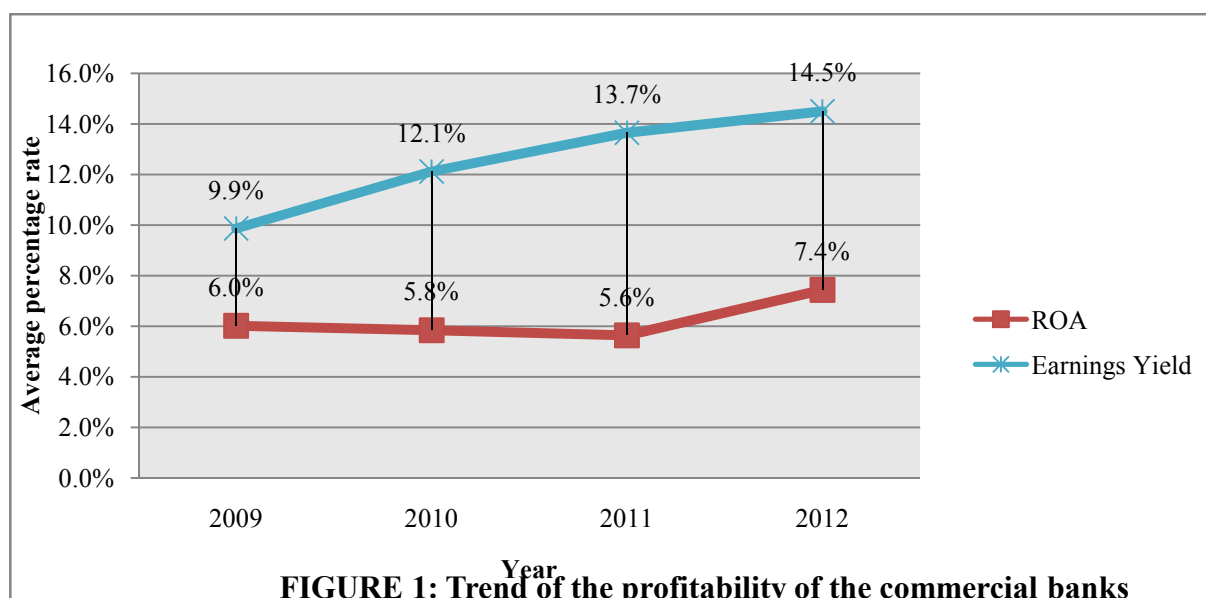
FIGURE 1: Trend of the profitability of the commercial banks