Accounting Ratio: The Organisation Decision Making and Evaluation Dynamism

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Abstract

Accounting ratios has been recognized generally as strong tool for evaluating the performance and financial conditions of business entity. Accounting ratios provide relevant measure and indicators of firm's performance and financial situation, however, the weakness of ratio analysis is obvious, of several weaknesses, the most potent is the lack of generally accepted standard of comparison. As a result only little published studies to explore the relationship between bank size, bank performance, financial institutions of banks among other factors using accounting ratios has been done. The study, therefore, aims at examining the significant relationship between financial variables such as capitalization, size, credit risk, liquidity and the performance of financial institution using accounting ratios and regression analysis as the relationship measuring factor. Ex-post fact research design using secondary data from two major players in the banking industry was adopted for the study covering the period between 2001 and 2012. The findings show that the ratios employed in this study have different effects on the performance of banks in Nigeria. The results indicated that the ratio of loan-loss provisions to loans or credit risk affect profitability negatively. Moreover, liquidity risk and capitalization affects profitability significantly. It was recommended that the financial institutions put in place measures to combat the menace of accumulation of unpaid loans and interest. And a unit in the financial institution should be created for generating, interpreting and monitoring financial relationship of variables in the financial institution from time to time

Keywords: Loan-loss, Bank performance, accounting ratios, Commercial banks.

Introduction

Financial ratios are useful indicators of a firm's performance and financial situation. They are the most powerful of all the tools used in the analysis and interpretation of financial statements. Financial ratios can be used to analyze trends and to compare the firm's financial performance to those of other firms. In some cases, ratio analysis can be used to predict future trend.

However, the determination of appropriate standard against which a company's ratio may be compared is often a difficult problem for financial analyst (Igben, 2009). To overcome this problem, a firm's financial ratio may be compared against the ratios of other firms in the same industry.

Financial ratios serve as important tool of evaluating the performance and financial conditions of a business entity over a period of time, empirical studies like Chen and Shimerda (1981) and Igben (2009) demonstrated the usefulness of financial ratios in this regard. Chen and Shimerda, (1980) captured the value of the accounting ratios when they averred that financially distressed firms can be separated from the non-failed firms in the years before the declaration of bankruptcy at an accurate rate of better than 90% by examining financial ratios

Financial ratios are tools of financial analysis. In financial ratio evaluation is normally done using the financial information generated by the firm. However, financial ratios can be classified according to the information they provide. The frequently used ratios are Liquidity Ratio, Asset Turnover Ratio, Financial Leverage Ratio, Profitability Ratio and Dividend Policy Ratios.

The profitability ratio which is the major ratio for analysis in this study as a measure of performance can assist in determining the different level of success of the firms at generating profit.

The objective of the study is to measure the financial performance of commercial banks using financial or accounting ratios, the study also seek to examine the effect of liquidity, credit risk, capital, operating expenses and the size of banks on their financial performance using accounting ratios

This study is aimed primarily at measuring the performance of the financial sector, particularly, commercial banks with the use of financial ratios or financial measures of bank's performance. Specifically it will examine the relationship between liquidity, credit risk, bank size, operating expenses and bank profitability is the measure of performance

Research problem

The financial sector consist of strings of financial activities whose major end is profit making, over the years the means and manner of measuring this financial performance remain issue of concern, the variables to use in the measurement of this performance is germane to growth and stability, the issue therefore is determining the variables to use in financial performance measurement and how well do these variables can measure the

performance in the financial sector . in the financial sector major identified measure of performance include size, capitalization, credit risk, operating expenses or liquidity as far as the banking sector is concern. The extent to wish each of these variables and indicators measure the performance over time is an issue of concern and factor to bed evaluated therefore it is the focus of the study to examine the extent and how effective these variables measure performance in the banking industry.

Literature review

The financial sector of the economy especially banking has continued to witness tremendous growth following the recapitalization process. The history of the Nigeria banking system is replete with growth and burst cycles in the number of operating banks and their branches (Umar and Olatunde, 2011).Banks, as the critical part of financial system, play an important role in contributing to a country's economic development (Said and Tumin 2011) The banking system promotes economic growth and development through the process of financial intermediation. The success of the system in performing this role is predicted on the soundness of the system (Nzewi, 2009). There the continue existence of this banks is of value and very important to all stakeholders of the banks therefore as observed by Oladele, Sulaimon and Akeke (2012), the financial performance failure in Nigeria banks resulted in loss of public confidence in the banking sector. The significant changes that have occurred in the financial sector of Nigeria have necessitated carrying out the financial performance analysis of banks. Oladele et al. (2012) observed that performance analysis is an impotent tool used by various agents operating either internally to the bank or who form part of the banks external operating environment. This is why investors in share and bonds issued by banks consider the investment outcome based on the performance before forming an opinion about the ability of its management. Studies have shown that performance measurement interlinks financial indicators such as the use of financial ratio. These measurements aid the interpretation of bank performance and also serving as crucial policy making tools in reacting to the dynamics of the market for financial services. This also necessitates several classification of banks into failed/surviving financially; successful/non financially successful; and vulnerable/resistant as well as troubled/healthy banks (Oladele et al., 2012).

In regard to financial ratios Athanasoglou *et al.*, (2006) In their study of liquidity and profitability relationship in business organization noted that liquidity risk is as an important internal determinant of bank profitability is without it the bank could be forced to liquidation and will not be able to carry out it banks functions. Illiquidity would normally arises from the possible inability of a bank to accommodate decreases in liabilities or to fund increases on the assets' side of the balance sheet. The liquidity risk is represented by the bank's liquidity assets to the total assets. Holding liquidity assets reduces the risk that banks may not have sufficient cash to meet deposit withdrawal, or new loan demand, thereby forcing them to borrow at excessive costs. Thus, as the proportion of liquid assets increases, bank's liquidity risk decreases.

To avoid insolvency, banks often hold liquid assets that can be easily converted into cash. However, liquid assets are usually associated with lower rate of return; therefore, the higher liquidity would be associated with lower profitability. This is supported by Molyneux and Thornton(1992) who prove that there is a weak negative relationship between the level of liquidity and the bank profitability. However, Qin, X. & Pastory, D. (2012). found that there is a strong and positive relationship between them

Capital is also found to be another important internal determinant of bank profitability. Said and Tumin, (n.d) noted that there is a positive relationship between bank capitalization and profitability. Athanasoglou *et al.* and Berger(nd) also observed that capital is better modeled as an internal determinant of bank profitability, as higher profits may lead to an increase in capital and it also implies that well-capitalized banks face lower risks of going bankrupt, which reduces their costs of funding. The capital adequacy of a firm can be measured by the equity to total assets ratio. The higher the capital assets ratio, the lower the leverage and therefore the lower the risk (Said and Tumin, n.d)

In study by Sayilgan and Yildirim (2009) the Return on asset(ROA) was positively affected by capital adequacy. Also, Sayilgan and Yildirim, (2009) in a study also found out that capital adequacy ratio affected Return on equity(ROE) positively in the period of 1992-1998 using data from banking sectors of France, Germany, Spain, Denmark, Italy and

Said and Tumin (2011) concluded that the effect of capital on banks performance is rather mixed. Capital strength and the ROAE of china's banks profitability are positively and significantly related. This factor, however, is not significant for Malaysian banks. On the micro independent variables front, profitability seems to have been positively affected by capital adequacy in broad and negatively by growing off-balance sheet assets (Sayilgan and Yildirim, 2009).

Sayilgan and Yildirim, (2009) capital adequacy ratio affected ROE of USA banks positively in 1983-1989 and negatively in 1989-1992. Based on these results, Sayilgan and Yildirim, (2009) argued that the relationship between capital adequacy ratio and profitability depended on the specific circumstances of the time periods observed. According to the results of the study, a high capital adequacy ratio positively affects profitability when financial situation of banks is perceived as risky and it negatively affects profitability in normal situations due to alternative cost of capital. The main problem in benefiting from this result is the difficulty of determining an optimal level for the capital adequacy ratio.

Operating expenses represent an element that is as important as the precedents in determining the level of bank profitability. Operating expenses consist of staff expenses, which comprise salaries and other employee benefits (including transfers to pension reserves and administrative expenses). Administrative expenses include various types of bank expenses associated with bank operations, such as the adoption of new information technology, depreciation, legal fees, marketing expenses, or non-recurring costs related to bank restructuring. Provisions for loan losses are not included in operating expenses (Athanasoglou *et al.*, (2006) Controlling operating costs is closely related to the concept of managerial efficiency or productive efficiency., Athanasoglou et al.(2006) found a positive relationship between efficiency and performance of Greek banks. This result is explained by the fact that efficient banks are those able to use their resources appropriately and to reduce costs, resulting in better performance. (Salloum and Hayek, 2012).

Said and Tumin (2011) as well as Athanasoglou et(2006) concluded from their empirical studies that operating expense is significantly negative related to banks performance For the most part, the literature argues that reduced expenses improve the efficiency and hence raise the profitability of a financial institution, implying a negative relationship between an operating expenses ratio and

As for the credit risk, Cooper *et al*(2003) found that changes in credit risk may reflect changes in the health of bank's loan portfolio which may in turns affect the bank's Performance. since increased exposure to credit risk is normally associated with decreased firm profitability meaning that the more the banks were exposed to high-risks loans, the higher the accumulation of unpaid loans and the lower the profitability (Athanasoglou, 2006). There is generally accepted relationship between risk and return that is, the higher the risk, the higher the expected return. Therefore, traditional measures of bank performance have measured both risks and returns (Tarawneh, 2006).

The bank size is also a fact in relation to the performance of the bank, bank size is used to capture the fact that larger banks are better placed than smaller banks in harnessing economies of scale in transactions to the plain effect that they will tend to enjoy a higher level of profits. Consequently, a positive relationship is expected between size and profits. Bank size is generally used to capture potential economies or diseconomies of scale in the banking sector. This variable controls for cost differences and product and risk diversification according to the size of the credit institution. The first factor could lead to a positive relationship between size and bank profitability, if there are significant economies of scale, while the second to a negative one, if increased diversification leads to a lower credit risk and thus lower returns (Athanasoglou *et al.*, 2006). Nzewi (2009) opined that size could be a great advantage in relation to cost and may assist in enhancing profitability through cost reduction arising from economies of scale, operating efficiency and synergy.

Athanasoglou *et al.* (2006) suggested that the effects of the banks size on profitability may be positive up to a certain limit and beyond that point it could be negative due to various factors such as the sample country selected and period of study. Therefore, the relationship between the bank size and its profitability is expected to be uncertain due to the difference in various factors.

Generally, the effect of a growing size on profitability has been proved to be positive to a certain extent. However, for banks that become extremely large, the effect of size could be negative due to bureaucratic and other reasons. Hence, the size-profitability relationship may be expected to be non-linear.

Profit is the ultimate output of a business firm and any firm that fails to make sufficient profits has no future. The efficiency of a firm is always measured in terms of profits. Apart from the management of the firm, creditors and shareholders are equally interested in the profitability of the firm. According to Nzewi, (2009) The creditors interest in this respect is in getting their interest paid regularly and the repayment of the principal at due date. Shareholders on the other hand, want to get their required rate of return, and this is possible only when the firm is earning profits, generally, the interested parties in the profitability ratio are the shareholders, management, employees, creditors, competitors, potential investors.

Umar (2011) further noted that Profitability measures indicate whether a company is performing satisfactorily. Profitability is used among others things, to measure the performance of management, determine investment opportunity in a firm, and to determine a company's performance relative to its competitors

The fact that the failure of banks impact negatively on the customer's confidence made bank performance to arouse interest from banks regulatory authorities (Oladele, Sulaimon and Akeke, 2012).

Athanasoglou *et al.* (2006) posited that in the literature, bank profitability, typically measured by the return on assets (*ROA*) and /or the return on equity (*ROE*), is usually expressed as a function of internal and external determinants. Internal determinants are factors that are mainly influenced by a bank's management decisions and policy objectives while the external determinants relate to macroeconomic variables that reflect the economic and legal environment where the credit institution operates.

Sayilgan and Yildirim, (2009) noted that the determination of changes in the profitability functions of

banks are expected to be useful to policy makers both from the public sector and the private sector Return on Assets (ROA) reflects the ability of a bank's management to generate profit from the bank's assets and it is calculated as net profit after tax divided by total assets. Some times Average assets are used in order to capture any differences that occur in assets and equity during the fiscal year. Athanasoglou, Delis and Staikouras (2006) noted that ROA is affected positively by the logarithm of total assets and ratio of equity to total assets and negatively by ratios of provisions to total credits and operational cost to total assets in their study using data from Albania, Bosnia, Herzegovina, Bulgaria, Croatia, Romania and Serbia-Montengro for the period of 1998-2002.

The return on equity (ROE) is considered to be one of the profitability performance ratios. It is calculated as the net profit after taxes divided by total owners' equity. It reflects the bank management's ability to generate net profits from using the owners' equity as one of the financial sources (Tarawneh, 2006). The European Central Bank (2010) is of the opinion that there is a variety of indicators used to measure banks' performance beyond *ROE*, but *ROE* remains one of the most surveyed. Since *ROE* is the most well-known performance indicator widely used by market participants and banks themselves in their disclosures (i.e. at the top line of bank reports), targeting *ROE* has exposed banks to higher unexpected risk levels and opened the door to a more short-term-oriented approach to balance sheet management in other words, *ROE* reveals the earning power on the shareholders equity investment From the point of view of the investors, it is the most important ratio because it tells in clear language what each *naira* of investment is yielding. And since the earning of satisfactory return is the most desirable objective of business firms, return on equity reflect the extent to which dividend objective is accomplished. It is of great interest to the present and prospective shareholders at the same time it is of great concern to management which has the responsibility for maximizing the owners' wealth. And because benefiting shareholders is the major goal of the firm, return on equity is in the accounting sense, the true bottom-line measure of performance (Nzewi, 2009).

In summary, services organizations in general and financial services in particular are considered to be the key factor for growth and success of projects in both industrial and developing countries enhance financial ratios will be of value in estimating their performance of time to time and for variety of purpose

Research Methodology

The study was carried out using ex-post facto research design, secondary data sourced from the financial report of selected firms for the study were used for the required analysis of the subject matter of the work. The study population included all commercial banks operating in the Nigerian Banking Sector which contains the twentyfive banks that emerged after the consolidation exercise. Judgmental sampling technique was employed in selecting two banks used for the study. Thus, First Bank of Nigeria Plc. and Ecobank Nigeria Plc. were selected. In the consolidation era of 2005 First Bank acquired FBN Merchant Bank, and MBA International Bank (Nzewi, 2009). Ecobank Nigeria Plc. also acquired Oceanic Bank Plc. These two banks have been stable, having withstood the vicissitudes in the banking industry over the years. They have therefore, set a sustainable pace and can be said to mirror the sustainable performance in the financial sector hence their choice. the data for the study were obtained primarily from the published and audited annual reports of the Nigeria banks for the period between 2007 and 2012. This period coincides with the post-banks reforms in the Nigerian financial sector. The study used SPSS 17 software package to analyze the data collected where all the required performance measures were calculated.

Model specifications

The model constructed for finding the determinant of ROAA (ROAE) is as follows: ROA = $\beta_0 + \beta_1 LQ + \beta_2 CR + \beta_3 CAP + \beta_4 OPE + \beta_5 SIZE + U_{it}$ Where: ROAA (ROAE) = Return on Average Assets (Return on Average Equity) β_0 = constant term $\beta_1,...,\beta_5$ = Coefficients for independent variables LQ = Liquidity risk CR = Credit risk CAP = Capital OPE = Operating expenses SIZE= Bank size U = Error term i = Bank t = Time period

PRESENTATION AND ANALYSIS OF DATA

Correlation matrix First bank plc Table 1

	BANK	OPERATING	CREDIT	BANK	
	SIZE	EXPENSES	RISK	CAPITALIZATION	LIQUIDITY
	RATIO	RATIO	RATIO	RATIO	RISK RATIO
BANK SIZE RATIO	1.000	.153	362	447	894
OPERATING	.153	1.000	.024	280	083
EXPENSES RATIO					
CREDIT RISK	362	.024	1.000	249	.252
RATIO					
BANK	447	280	249	1.000	.233
CAPITALIZATION					
RATIO					
LIQUIDITY RISK	894	083	.252	.233	1.000
RATIO					

Table 2

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.	
(В	Std. Error		0.140	
(Constant)	.122	0.070	1.753	0.140	
LIQUIDITY RISK RATIO	004	.053	-0.070	0.947	
CREDIT RISK RATIO	.152	0.091	1.671	0.804	
BANK CAPITALIZATION RATIO	.012	0.064	0.184	-0.347	
OPERATING EXPENSES RATIO	046	0.111	-0.418	-0.254	
BANK SIZE RATIO	023	.020	-1.019	-1.139	
R	0.810 ^a				
R square	.656				
F value/ p value	1.907	0.248			

Dependent Variable: ROA

The Ordinary Least Square (OLS) regression analysis was performed for all variables and results are presented in table 2. The coefficients of determination (R squared) indicated that 65.6% of the variation in the dependent variables (ROA) is explained by variations in the respective independent variables. In this study, the operating expenses, liquidity ratio and bank size ratio are negatively related to the profit performance of the firm,. Since improved management of the operating expenses and liquidity risk will increase efficiency and therefore raise profits of banks, the ratio of these expenses to total assets is expected to be negatively related to profitability. This implies that the higher the operating expenses results in lower profit. As it is expected, the empirical results offer strong evidence of a negative relationship between the operating expenses and performance of fist bank. The result is consistence with the findings of Bourke (1989), Said and Tumin(2011) and Swarnapali(2014). The significant of the t-value and the significant of the F-value revealed that all independent variables are neither individually or collectively significant, hence the hypothesis that credit risk ratio, liquidity risk ratio, bank size ratio and capitalization ratio and operating expenses ratio are not significantly related to organization performance is accepted

The correlation matrix was carried out to measure correlation factor or the relationship between the five independent variables, the correlation between all the independent variables are low except between liquidity ratio and bank size ratio which is 89%.

Eco bank plc Table 3 Correlation matrix

	BANK	OPERATING		BANK
	SIZE	EXPENSES	LIQUIDITY	CAPITALIZATION
	RATIO	RATIO	RISK RATIO	RATIO
BANK SIZE RATIO	1.000	.294	.372	887
OPERATING	.294	1.000	127	282
EXPENSES RATIO				
LIQUIDITY RISK	.372	127	1.000	588
RATIO				
BANK	887	282	588	1.000
CAPITALIZATION				
RATIO				

Table 4

	В	Std Error	t	P value
(Constant)	4.093	.548	7.463	.000
LIQUIDITY RISK RATIO	5.269	1.038	5.075	.002
BANK CAPITALIZATION RATIO	-2.830	2.502	-1.131	.301
OPERATING EXPENSES RATIO	-1.358	.658	-2.063	.085
BANK SIZE RATIO	29.908	10.300	2.904	.027
R	.964 ^a			
R square	.929			
F value/ P Value	19.527	0.001		

Dependent Variable: ROA

The Ordinary Least Square (OLS) regression analysis was performed for all variables and results are presented in table 4. The coefficients of determination (R squared) indicated that 93% of the variation in the dependent variables (ROA) is explained by variations in the respective independent variables. In this study, the operating expenses are negatively related to the profit performance of the firm. Since improved management of the operating expenses will increase efficiency and therefore raise profits of banks, the ratio of these expenses to total assets is expected to be negatively related to profitability. This implies that the higher the operating expenses the lower the profit. As it is expected, the empirical results offer strong evidence of a negative relationship between the operating expenses and performance. As shown by the coefficients in table 4, operating expenses contribute significantly and negatively to performance of Eco bank plc for the period covered. The result is consistence with the findings of Bourke (1989), Said and Tumin(2011) and Swarnapali(2014). The significant of the t-value for liquidity risk and bank size ratios are significant at both 5% and 10% for the two ratios and not significant for bank capitalization and expenses ratios at both 5% and 10% and the significant of the F-value show a significant relationship between the dependent and the independent variables at 5% significant level, hence the hypothesis that liquidity risk ratio, bank size ratio, capitalization ratio and operating expenses ratio are collectively significantly related to organization performance is accepted however, only liquidity risk and bank size ratios are individually significant.

The correlation matrix was also carried out to measure correlation factor or the relationship between the four independent variables, the correlation between all the independent variables are low except between liquidity ratio and bank capitalization at 59% and between bank capitalization and bank size ratio at 89%.

Findings conclusion and recommendation

This study revealed that liquidity risk, bank capitalization, bank size ratio, operating expenses ratio and CREDIT RISK RATIO are significant factor in relation to bank performance however, the extent to wish each of them relate to performance is a function of the management of the firm. The study revealed that the ratios are not largely related to financial performance of the firm. However, in both firms studied the operating expenses are an influencing factor of the return on assets of the firm. Thus when the management watches the operating expenses well, there would be a corresponding increase in profit. Bank size have not been noticed to impact on the profit of the bank in the same vein bank capitalization do not impact on the profitability of the firm, bank size and bank capitalization is noticed to have good relationship such that the larger the capitalization the higher would be the growth of the bank in term of the size or branch network of the bank but the study of the two banks do not establish a sound relationship between profit and capitalization and bank size possibly some branch network could even be operated at loss. It was also noted that liquidity is also negatively related to profitability.

And it connote less investment in profitable assets. The study recommended that management of financial institution in Nigeria should set up financial analysis and monitoring section for the purpose of developing, analyzing and interpreting financial report of the bank on weekly, monthly, quarterly and yearly basis for dynamic and strategic response to challenges in the environment and to help quick and prompt decision making process.

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