Performance Evaluation through Ratio Analysis

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ABSTRACT

This study examines performance evaluation through ratio analysis of the selected quoted firms for the periods 2009 and 2013. The study employed descriptive statistic, Pearson correlation matrix and simple ordinary least square regression technique. The empirical findings using the simple regression techniques revealed that liquidity ratio has a negative and significant impact on firm performance. Leverage ratio and market ratio has a negative and a positive insignificant impact on firm performance respectively. Profitability ratio has a significant positive impact on firm performance evaluation. The study therefore recommends that management and policy holders should see and utilize effectively liquidity and profitability ratios as the real significant performance evaluation indicators and also pay attention to other possible variables that might contribute to performance evaluation through ratio analysis in further empirical work.

*Keywords***: Liquidity, Profitability, Market, Leverage Ratios, Performance Evaluation.**

INTRODUCTION
Background to the Study

Financial analysis using financial ratios is the most important and oldest method for analysis company performance. It has long been used to study the financial and credit position of organizations and to judge the results of their work. This method is based on the examination of financial statements. However, just because a number is included in a financial statement does not indicate whether that number is important and does not give us useful information; the importance of the number appears only when compared with other number (Tofeeq, 1997).

Financial ratios are tools used to analyze financial conditions and performance. Financial analysis means different things to different people. Trade creditors are primarily interested in the liquidity of the firm being analyzed. Their claims are short term and the ability of the firm to pay these can best be judged by an analysis of its liquidity.
Brigham and Ehrhardt (2010) state that financial ratios are designed to help evaluate financial statements. Financial ratios are used as a planning and control tool. Financial ratios analysis is use to evaluate the performance of an organization: it aims at determine the strong and weak

points and it offers solutions by providing appropriate plans based on the specific interest of the evaluator.

Firstly, the claims of bondholders are long term. They are interested in the cash flow of the firm to service debts over a long period of time. The bondholders may evaluate this by analyzing the capital structures of the firm, the major sources and users of fund, the firms profitability. Finally, an investor in a company's common stock is concerned principally with present and expected future earning as well as the stability of these earning over time. As a result, the investor usually concentrates on analyzing the profitability of the firm.

Statement of the Problem

Many financial and accounting models were developed during past decades. However, the financial ratios still kept its classical and fundamental power either as part of these financial and accounting models or as another important supportive analysis with it. Because of the proven power of the ratio analysis in the practical financial and planning analysis. Though however, financial ratios analysis has its limitations; which can be summarized as follows (Lermack, 2003): there is considerable subjectivity involved as there is no theory as to what should be the right number for the various ratios; ratios may not be accurately comparable across different companies due to a variety of factors such as different accounting practices and different financial year; ratios are based on financial statements that reflect the past only and are not an indication of the future; and financial statements provide an estimation of the costs and not values.

Emanating from the above, to evaluate a firm financial condition and performance, analysis and interpretation of various ratios should be given to a skilled analyst. Against this backdrop, the following research questions are used to guide our investigation:

(i)   To what extent does liquidity ratio create impact on firm performance evaluation?
(ii)   To what extent does leverage ratio affect firm performance evaluation?
(iii)   To what extent does market ratio affect firm performance evaluation?
(iv)   To what extent does profitability ratio affect firm performance evaluation?

0bjectives of the Study

The broad objective of this study is to provide empirical evidence on influence performance evaluation through ratio analysis using data from some selected quoted firms in Nigeria. The specific objectives will include:

(i)   To evaluate the impact of liquidity ratio on firm performance evaluation.
(ii)   To investigate the influence leverage ratio on firm performance evaluation.
(iii) To determine the influence of market ratio on firm performance evaluation.
(iv)   To determine the impact of profitability ratio on firm performance evaluation.

Research Hypotheses

In line with the research problems and objectives, the following hypotheses are formulated to be tested:

HO1: There is no significant relationship between liquidity ratio and firm performance evaluation.

HO2: There is no significant relationship between leverage ratio and firm performance evaluation.

HO3: There is no significant relationship between market ratio and firm performance evaluation.

HO4: There is no significant relationship between profitability ratio and firm performance evaluation.

LITERATURE REVIEW
Concept of Firm Performance Evaluation

Performance evaluation of a company is usually related to how well a company can use it assets, share holder equity and liability, revenue and expenses. Financial ratio analysis is one of the best tools of performance evaluation of any company. In order to determine the financial position of the company and to make a judgment of how well a company is efficient in its operation and management and how well the company has been able to utilize its assets and earn profit different methods and/or tools are used, among which is the financial ratios.

Financial ratio can be seen as a relationship between a two individual quantitative financial information connected with each other in some logical manner, and this connection, is considered as a meaningful financial indicator which can be used by the different financial information users. Brigham and Ehrhardt (2010) state that financial ratios are designed to help evaluate financial statements. Financial ratios are used as a planning and control tool. Financial ratios are used by internal and external financial data users in making their economic decisions; including investing, and performance evaluation decisions. Financial ratios analysis is used to evaluate the performance of an organization in order to determine the strong and weak points and it offers solutions by providing appropriate plans. However, a large number of standards and various financial ratios exist but the choice of ratios used depends on the activity of the organization and the purpose of analysis (Tofeeq, 1997).

Liquidity Ratio and Firm Performance Evaluation

Liquidity ratios determine the organization's ability to pay debt in short term. Liquidity performance measures the ability to meet financial obligations as they fall due. What began as credit concerns for the US sub-prime market developed into concerns in global credit markets with unknown financial exposures and potential losses (ABSA, 2009). The resultant uncertainty made financial market participants exceedingly risk averse, such that they were unwilling to invest in any markets or financial instruments other than 'safe havens'. This severely reduced the levels of liquidity in the global financial markets (SARB, 2009).

Thachappilly (2009), also state that the Liquidity Ratios help Good Financial .He know that a business has high profitability, it can face short-term financial problems and its funds are locked up in inventories and receivables not realizable for months. Any failure to meet these can damage its reputation and creditworthiness and in extreme cases even lead to bankruptcy. In addition, liquidity ratios are work with cash and near-cash assets of a business on one side, and the immediate payment obligations (current liabilities) on the other side. The near-cash assets mainly include receivables from customers and inventories of finished goods and raw materials. Coupled with, current ratio works with all the items that go into a business' working capital, and give a quick look at its short-term financial position. Current assets include Cash, Cash equivalents, Marketable securities, Receivables and Inventories. Current liabilities include Payables, Notes payable, accrued expenses and taxes, and Accrued installments of term debt). Current Ratio = Current Assets / Current Liabilities. Similarly, Quick ratio excludes the illiquid items from current assets and gives a better view of the business' ability to meet its maturing liabilities. Quick Ratio = Current Assets minus (Inventories + Prepaid expenses + Deferred income taxes + other illiquid items) / Current Liabilities. In the final ratio under this article is cash ratio .Cash ratio excludes even receivables that can take a long time to be converted into cash. Cash Ratio = (Cash + Cash equivalents + Marketable Securities) / Current Liabilities.

James (2009), Pronounce that it is the analysis of financial statements that is used to measure company performance. If the ratios indicate poor performance, investors may be

reluctant to invest. Therefore, the current ratio or working capital ratio, measures current assets against current liabilities. The current ratio measures the company's ability to pay back its short-term debt obligations with its current assets. Wherefore, the acid test ratio or quick ratio, measures quick assets against current liabilities. Quick assets are considered assets that can be quickly converted into cash. Generally they are current assets less inventory. The current ratio is calculated by dividing current assets by current liabilities. Current asset includes inventory, trade debtors, advances, deposits and repayment, investment in marketable securities in short term loan, cash and cash equivalents, and current liabilities are comprised short term banks loan, long term loans-current portion, trade creditors liabilities for other finance etc.

Leverage Ratio and Firm Performance Evaluation

Leverage ratio shows how efficient the organization uses other people's money and whether it is using a lot of borrowed money (Lasher, 2005). Thachappilly (2009), in this articles him express about debt management. He mention that the Ratio of Debt to Equity has Implications for return on equity debt ratios check the financial structure of the business by comparing debt against total capital, against total assets and against owners' funds. The ratios help check how "leveraged" a company is, and also the financial maneuverability of the company in difficult times. Debt ratios and the related interest coverage ratio checks the soundness of a company's financing policies. One the one hand, use of debt funds can enhance returns to owners. On the other hand, high debt can mean that the company will find it difficult to raise funds during lean periods of business (James, 2010). The ratio of these numbers tells a lot about the business. It is calculated by taking the debt owed by the company and divided by the owner's equity, also known as capital.

Market Ratio and Firm Performance Evaluation

Market value ratio is also call share ownership ratio. It referred to the stockholders way of analyzing the present and future investment in a company. In this ratio the stockholders are interested in the way certain variables affect the value of their holdings. It helps the stockholder to be able to analyze the likely future market value of the stock.

Abu Shanab (2008) examined the impact of returns and risks on the share prices for a sample of 38 industrial public companies in Jordan listed on Amman Security Exchange for the period of 2000 to 2007. The results of the study showed that there is no effect for the returns, risks and dividends on the market value per share. However, the results indicated that there is a significant relationship between cash flow and share prices.

AL Kurdi (2005) study explored the ability of the published accounting information to predict share prices for a representative sample of 110 Jordanian public companies listed in Amman Security Exchange for the period of 1994 to 2004. The results informed that there is a relationship between the published accounting information of the insurance public companies and their share. The results also informed that market information have more ability on predicting share prices compared to the accounting information. Abu Hasheesh (2003), examined the role of published accounting Information in predicting share prices. The study used a sample of 40 Jordanian public companies listed in Amman Security Exchange for the year 2003. The results showed that there is a positive significant positive relationship between the market price per share with the ratios of net profits to equity, net profits to total assets, and dividends to net profits as a total. The results showed also a significant negative relationship between the market price per share, with the ratios of fixed assets to total assets, the creditors total to total of cash sources, and the wages ratio to total of expenses ratio.

Profitability Ratio and Performance Evaluation

Profitability ratios are indicators for the firm's overall efficiency. It's usually used as a measure for earnings generated by the company during a period of time based on its level of sales, assets, capital employed, net worth and earnings per share. Profitability ratios measures earning capacity of the firm, and it is considered as an indicator for its growth, success and control. Creditors for example, are interested in profitability ratios since this indicate the company's capability to meet their interest obligations. Shareholders are also interested in profitability. This indicates the progress and the rate of return on their investments. Profitability ratio evaluate how well a company is performing by analyzing how profit was earned relative to sales, total assets and net worth of companies.

James (2009), state that the Profitability Ratio Analysis of Income Statement and Balance Sheet are used to measure company profit performance. The income statement and balance sheet (now called Statement of Comprehensive Income and Statement of Financial Position, respectively) are the two important reports that show the profit and net worth of the company. Its analyses show how well the company is doing in terms of profits compared to sales. He also shows how well the assets are performing in terms of generating revenue.

Thachappilly (2009), discuss about the Profitability Ratios Measures on Margins and Returns such as gross, Operating and/or Net Profits, ROA ratio, ROE ratio, ROCE ratio. However, he stated that to determine the Gross profit is the surplus generated by sales over cost of goods sold. That is, Gross Profit Margin = Gross Profit/Net Sales or Revenue. Moreover, Operating profits are arrived at by deducting marketing, administration and R&D costs from the gross margin. Nonetheless, He explains that Operating Profit Margin = Operating Profit/Net Sales or Revenue. He also explains that the return on resources used is divided into three categories such as ROA, ROE, and ROCE: At first the Return on Assets = Net Profit/ (Total Assets at beginning of the period + Total Assets at the close of the period)/2).The denominator is the average total assets employed during the year. Return on Equity = Net Profit/ (Shareholders' Equity at the beginning of the year + Shareholders' Equity at the close of the year)/2).ROCE ratio: Return on Capital Employed = Net Profit/ (Average Shareholders' Equity + Average Debt Liabilities).

Oberholzer and Van der Westhuizen (2004) investigated the efficiency and profitability of ten banking regional offices of one of South Africa's larger banks. This study demonstrates how conventional profitability and efficiency analyses can be used in conjunction with DEA. Although their study concentrated on banking regions, their findings confirm those of Yeh (1996) that DEA results as an efficiency measure have a relationship with both profitability and efficiency ratios. The conclusions were that there are significant relationships between conventional profitability and efficiency measures and allocated cost and scale of efficiency had no significant relationship with technical efficiency.

METHODOLOGY

The population of the study consists of all quoted companies in Nigeria Stock Exchange whom must have finished its obligation in delivering annual reports for the periods 2009 to 2013. The sampled size of this study is based on the availability of data and simple random sampling techniques will be used in selecting the sampled companies. Fifty (50) sampled quoted companies listed with the Nigerian Stock Exchange were used to ensure statistically valid generalization. The nature of this study necessitated the use of secondary data. The data for the selected companies were collected sourced from the Nigeria Stock Exchange Fact books and annual reports of the sampled companies.

Model Specification

In light of the above methodology and theoretical framework employed to capture performance evaluation through ratio analysis in Nigeria. A multiple linear regression model using a set of cross-sectional data was developed for the study. The functional form of the model is;

PERFEVA = f(LIQR, LEVR, MKTR, PROFTR)

The multiple regressions with an error term is has stated below:

PERFEVA=α+β1LIQR +β2LEVR +β3MKTR + β4PROFTR +μ

Operationalization of Variables

α = Constant

β1- β4 = Coefficients of explanatory variables

μ = Error term over cross-section and time

Dependent variable

PERFEVA =Firm Performance evaluation: Return on asset was used to proxy firm performance evaluation.

Independent variables

LIQR = Liquidity ratio. Current ratio is used to proxy liquidity ratio.

LEVR = Leverage ratio. Debt to equity ratio is used for leverage ratio.

MKTR= Market ratio. Earnings per share is used as a proxy for market ratio.

PROFTR = Profitability ratio. Return on equity is used as a proxy for profitability ratio.

Method of Data Analysis

The cross-sectional data collected for the study were analyzed by using multiple regression techniques to capture performance evaluation through ratio analysis. Other preliminary statistical technique will be analyzed for the study as descriptive statistics, Pearson correlation and Heteroskedasticity result. The statistical technique for empirical testing is with the help of EViews 8.0 econometric software.

DATA ANALYSIS AND INTERPRETATION

Data Analysis

The below is the descriptive statistics of the sampled firms that disclosed information concerning ratio analysis for the periods 2009 to 2013.

Table 1: Descriptive Statistics.

Variables	Mean	Std. Deviation	Jarque-Bera
ROA	0.099	0.342	74217.88(0.0)*
LIQR	1.010	0.806	26048.45(0.0)*
LEVR			367.54(0.0)*
	12.200	20.100	178820.9(0.0)*
MKTR			583.72(0.0)*
	3.629	30.580	
PROFTR			
	6.020	11.095	

Source: Author (2015)

Table 1 shows the mean (average) for each of the variable, their standard deviation (degree of dispersion) and Jarque-Bera (JB) statistics (normality test). The results in table 1 provided some insight into the nature of the selected firms that were used in this study. Firstly, the large standard deviation of leverage ratio and market ratio shows that these variables drive firm performance evaluation of the sampled firms even profitability ratio also drive firm performance

evaluation with a standard deviation of 11.095. The high value of the standard deviation may also associate with high risk. Secondly, it is observed that on the average, the performance of the sampled quoted firms in Nigeria is about 9%. Lastly, the Jarque-Bera (JB) statistics in table 1 shows that the variables are normally distributed at 1% level of significance.

In examining the relationship among the variables, we employed the Pearson correlation coefficient (correlation matrix) and the results are presented in table 2.

Table 2: Pearson Correlation Matrix

	ROA	LIQR	LEVR	MKTR	PROFTR
ROA	1.000				
LIQR	-0.156	1.000			
LEVR	0.048	-0.059	1.000		
MKTR	0.059	-0.260	0.064	1.000	
PROFTR	0.189	-0.081	0.459	1.122	1.000

Source: Author (2015)

In Table 2, we focus on the correlation between firm performance evaluation (ROA) and the individual explanatory variables. The result shows that performance is negatively associated with liquidity ratio (LIQR = -0.156 while leverage ratio (LEVR= 0.048), market ratio (MKTR 0.059) and profitability ratio (PROFTR) are positively correlated with firm performance evaluation. A closer look at the value of the correlation coefficient results revealed that leverage ratio and profitability ratio that has a significant correlation relationship. The correlation matrix also revealed that no two explanatory variables were perfectly correlated. This means that there is the absence of multicolinearity problem in our model. Multicollinearity between explanatory variables may result to wrong signs or implausible magnitudes, in the estimated model coefficients, and the bias of the standard errors of the coefficients.

The simple regression result obtained is presented in table 3 below.

Table 3: Simple Regression Result

Explanatory variables	Coefficient	T-Test	Prob –Value
CONSTANT	0.134	3.311	0.0011
LIQR	-0.060	-2.114	0.0356
LEVR	-0.0009	-0.720	0.4719
MKTR	1.610	0.021	0.9831
PROFTR	0.006	2.742	0.0066

R-squared = 0.058061,
Adjusted R-squared = 0.041165,
F-statistic = 3.436398,
Prob (F-stat) = 0.009486
DW= 1.711164.

From table 3 above, it would be observed from the coefficient of determination (R^2) value of 0.041165 that about 4% of the systematic variations among the sampled firms are jointly explained by the independent variables. This means that the low value of adjusted R-squared is attributed to the exclusion of other possible variables that might contribute to performance evaluation through ratio analysis. The F- statistic value of 3.436398 and its associated p-value 0.009486 show that the model on the whole is statistically significant. This means that there exists a significant linear relationship between the variables.

Following the above, it should be noted that liquidity ratio (LIQR) has a significant negative impact on firm performance evaluation (ROA). This implies that high liquidity among

the sampled firms will significantly lead to low performance of the firms. The significant negative impact of liquidity ratio is that the variable passed the t-test at 5% level of confidence. Leverage ratio (LEVR) has a negative and insignificant impact on firm performance evaluation (ROA). The insignificant of the variable is because the t-test failed at even 10% level of confidence. Market ratio (MKTR) has a positive and insignificant impact on firm performance evaluation (ROA) while profitability ratio (PROFTR) has a positive significant impact on firm performance evaluation (ROA). This implies that increase in profitability ratio will lead to significant increase in firm performance evaluation.

The Durbin Watson value of 2.94367 revealed the absence of serial correlation in the result but it is irrelevant due to the nature of the data employed.

SUMMARY OF FINDINGS

This study examines performance evaluation through ratio analysis of the selected quoted firms for the periods 2009 and 2013. The study employed descriptive statistic, Pearson correlation matrix and simple ordinary least square regression technique. The descriptive statistic revealed that the high value of the standard deviation of leverage ratio, market ratio and even profitability ratio may be associated with high risk. The Jarque-Bera (JB) statistics shows that the variables are normally distributed at 1% level of significance. Pearson correlation matrix value revealed that leverage ratio and profitability ratio has a significant correlation relationship while all other explanatory variables are weakly correlated with firm performance evaluation. The correlation matrix also revealed that no two explanatory variables were perfectly correlated. This means that there is absence of multicolinearity problem in our model. From the empirical findings using the simple regression techniques, it was observed that liquidity ratio has a negative and significant impact on firm performance of quoted firms in Nigeria at 5% level of significance. Leverage ratio and market ratio has a negative and a positive and insignificant on firm performance evaluation at even 10% level. Profitability ratio has a significant positive impact on firm performance evaluation. The Durbin Watson value of 2.94367 revealed the absence of serial correlation in the result but it is irrelevant due to the nature of the data employed.

CONCLUSION

This study examined performance evaluation through ratio analysis in quoted Nigerian firms. From the empirical findings using the simple regression techniques, it was observed that liquidity ratio has a negative and significant impact on firm performance evaluation of quoted firms in Nigeria at 5% level of significance. Profitability ratio has a significant positive impact on firm performance evaluation. Profitability ratios measures earning capacity of the firm, and it is considered as an indicator for its growth, success and control.

Conclusively, this research calls for further research to be conducted in the area of performance evaluation through ratio analysis not only because it was observed that ratio analysis is a powerful tool for evaluating company's performance but also due to the low value of adjusted R-squared.

RECOMMENDATION

Based on the empirical findings, the study therefore suggests that;

(i)   The study recommends that management and policy holders should see liquidity ratio as the major factors influencing firm performance evaluation as a result of its negative impact.

(ii)   It should be recommended that profitability ratio should be regarded as a factor that determines performance evaluation among the selected quoted firms in Nigeria. This

is because the variable has a significant positive impact on firm performance evaluation.

(iii)   The study suggested the use of other possible variables that might contribute to performance evaluation through ratio analysis in further empirical work.

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