

## Investigating the impact of using accounting ratios SS a tool for measuring performance

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**Abstract:** The paper investigates the impact of using accounting ratios as a tool for measuring performance using the time series analysis and annual data from 2009 to 2012. The Z-score model was used to determine the company's financial health. The SPSS software package was used to verify the information collected for this study. The result implies that there exist a significant relationship between liquidity ratio and the profitability of the firm and also there exist a significant relationship between liquidity and profitability of a firm. Thus, the analyzing of organization data will help to reveal organization performance and also a proper regulation guiding financial performance should be introduced into the banking sector.

**Keywords:** Accounting Ratios, Z-score Model, Liquidity Ratio, Financial Performance.

### INTRODUCTION

The history of accounting ratio analysis dates far back to the end of the previous century [1]. The utility of accounting data seems to be assumed axiomatically by most accountants, but it is interesting to trace how accounting data have been used. Accounting ratio is a yardstick for business performance under good corporate governance, the accounting ratio can be said to be a true realistic measure of organization performance. A firm's operating performance and financial position is judged by the information contained in the financial statement used by the management, creditors, investors, and other users of information. Performance is the most important element in management activities of all kinds of enterprises; profit oriented, non-profit oriented and public institutions.

In view of the above [2], defined accounting ratio as proportion or fraction or percentage expressing the relationship between them in a set of financial statement and other items in the same financial risk borne by long term creditors and equity shareholders. It is expressed as: Gearing ratio = long term debt/Equity capital. By long term debt we mean fixed interest rate of company which commonly includes creditors amount falling due after more than one year such as loans and debentures while equity means net worth of a business consisting of share capital, share premium etc. A firm needs to be aware of its ability to meet long term obligation (solvency ratio) debt equity ratio = outsider's funds/ shareholder's funds. The ratio is very useful to assess the long term financial position of the firm, and also a firm needs to limit its inability to pay their cash debt (insolvency ratio), which involves a lack of liquidity to pay debts as they fall due. Balance sheet insolvency involves having negative net asset situation where liability exceeds asset. Accounting ratio is the process of identifying the strength and weaknesses of the firm, it is the starting point for making plans before using any sophisticated and planning process.

The primary cause of ratio analysis in general was Euclid rigorous analysis properties of ratio book V of his element 300 B.C. However the adoption of ratio as a tool of financial statement is a relative development. Ratio analysis can reveal most of the information about the company when it is used effectively, it is interpreted rather than the calculation that makes accounting ratio a useful tool, for business managers. An analyst must be aware of the strengths and weakness of this method for correct assessment of these values. There are basically two uses of accounting ratio analysis: to track individual firm performance over time and to make comparative judgements regarding firm performance. Firm performance is revalued using trend analysis- calculating individual ratios on a per-period basis, and racking their values over time. The use of financial reporting is the main aspect in performance. According to [3], financial reporting is not the end in its self but it is intended to provide information that is useful in making business and

economic decisions. It is in this regard the researcher was motivated in finding the extent to which management dealers may depend on accounting ratios in business performance.

There are many different groups' of people who are interested in the affairs of business entities and who are therefore likely to use their accounts. Although the governments as tax collector is interested mainly in the past, most users including the governments in other roles are more interested in what is likely in the future. Such people will therefore use the accounts for a past period to help them make a judgement on the likely future success or otherwise of the entity. Relatively little is known about the way in which accounts are used in the process of decision making but at a general level, it is clear that different groups will place greater or lesser emphasis on a particular of a company's performance. Both users (i.e. shareholders and suppliers) are interested in the future performance of the company but the emphasis of their interpretation will differ. In modern business environment, which is becoming more competitive, the survival of firms, be it small or large; depend upon the strategic decisions made by management. This is however done with the help of accounting ratios, which is a big challenge to most countries having shortage of professional accountants as it is the case to our country. As such, this study is aimed at finding out the impact of using accounting ratios in assisting business performance in the banking sector.

The general objective of this study is to investigate the impact of using accounting ratios as a tool for measuring performance. This broad objective is further broken down into the following specific objectives:

- To compare the relationship between trends in liquidity ratio and the profitability of the firm.
- To determine the relationship between liquidity and profitability of the firm.
- To determine the relationship between insolvency and the profitability of the firm

Effective management is very crucial to how well or poorly an organization performs its roles in economic activities. This is a topical issue that continues to attract comment from financial expert. The researcher is therefore interested in knowing whether or not the application of accounting ratios will serve as a tool for measuring business performance. The importance of this research cannot be over emphasized as it provides useful recommendation on how accounting ratios can provide insight into performance, efficiency and profitability of a firm. The research is also relevant in the enhancement of the interpretation of accounts and aid decision making for potential investors, existing investors, shareholders and government regulators.

## **EMPIRICAL LITERATURE**

The research areas reviewed are the functional form of the accounting ratios. Accounting ratios are widely used for modelling purposes both by practitioners and researchers. The firm involves many interested parties, like the owners, management, personnel, customers, suppliers, competitors, regulatory agencies, and academics, each having their views in applying financial statement analysis in their evaluations. Practitioners use accounting ratios, for instance, to forecast the future success of companies, while the researchers' main interest has been to develop models exploiting these ratios. Many distinct areas of research involving financial ratios can be discerned. Historically one can observe several major themes in the financial analysis literature. There is overlapping in the observable themes, and they do not necessarily coincide with what theoretically might be the best found in areas exposed.

The history of financial statement analysis dates far back to the end of the previous century. However, the modern, quantitative analysis has developed into its various segments during the last two decades with the advent of the electronic data processing techniques. The empiricist emphasis in the research has given rise to several, often only loosely related research trends in quantitative financial statement analysis. Theoretical approaches have also been developed, but not always in close interaction with the empirical research.

Technically, accounting ratios can be divided into several, sometimes overlapping categories. An accounting ratio is of form  $X/Y$ , where X and Y are figures derived from the financial statement or other sources of financial information. One way of categorizing the ratios is on the basis where X and Y. In traditional accounting ratio, analysis both the X and the Y are based on financial statements. If both or one of them comes from the income statement the ratio can be called dynamic while if both come from the balance sheet it can be called static. The concept of accounting ratios can be extended by using other than financial statement information as X or Y in the  $X/Y$  ratio. For example, financial statement items and market based figures can be combined to constitute the ratio.

## METHODOLOGY

The study area concentrates on selected banks which are four (4) in number; First Bank Plc, Skye Bank Plc, Guaranty Trust Bank Plc, Zenith Bank Plc, Stanbic ibtc as case study. The population was comprised solely the staff managers and accountant of financial statements and other records available on banks performance for 4 year period, which are from 2009-2012.

### Model Specification

For the purpose of this study, one methods of analysis will be employed which is the Z-score Model. The Z-score model developed by Edward I. Altman [4] is a quantitative balance sheet methods of determining a company's financial health. Altman's model used the following equation:

$$Z = 0.012(X_1) + 0.014(X_2) + 0.033(X_3) + 0.006(X_4) + 0.999(X_5)$$

Where,  $X_1$ = Working capital/Total assets %

$X_2$ = Retained Earnings/Total assets %

$X_3$ = Earnings before interest and taxes/Total assets %

$X_4$ = Market value equity/Book value of total debt %

$X_5$ = Sales/Total assets (times)

Here are the rules for interpreting the Z score.

When Z is  $>$  or  $= 3.0$ , the firm is most likely safe based on the financial data.

When Z is 2.7 to 3.0, the company is probably safe from bankruptcy, but this is in the grey area and caution should be taken

When Z is 1.8 to 2.7, the company is likely to be bankrupt within 2years

When Z is  $\leq 1.8$ , the company is highly likely to be bankrupt.

However many users of the formula preferred it in this form:

$$Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 1.0X_5$$

This is a preference for using 0.10 for 10% for the first four variables ( $X_1$ - $X_4$ ) and rounding 0.999 to 1.0 for  $X_5$ .

## DATA ANALYSIS AND DISCUSSION OF RESULTS

The data spanned from year 2009 to year 2012 was taken as the periods of study. The analysis was done using SPSS software package version 17.0. The key findings of this research are presented in Tables. Keys to research variables used in this research are presented below:

### PRESENTATION OF FREQUENCIES OF ALL KEY VARIABLES.

#### FIRST BANK NIGERIA PLC

Working Capital					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	33.20	1	25.0	25.0	25.0
	56.01	1	25.0	25.0	50.0
	62.68	1	25.0	25.0	75.0
	76.06	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
Equity/Debts					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1144971.00	1	25.0	25.0	25.0
	1410473.00	1	25.0	25.0	50.0
	1841697.00	1	25.0	25.0	75.0
	2047432.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
Earnings Before Interest and Tax					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.76	1	25.0	25.0	25.0
	17.08	1	25.0	25.0	50.0
	17.59	1	25.0	25.0	75.0
	26.11	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

<b>Retained Earnings/Reserves</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	19670180.00	1	25.0	25.0	25.0
	28934836.00	1	25.0	25.0	50.0
	31976321.00	1	25.0	25.0	75.0
	60086177.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
<b>Net Operating Income from Sales</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15491.00	1	25.0	25.0	25.0
	34984.00	1	25.0	25.0	50.0
	36910.00	1	25.0	25.0	75.0
	46836.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

Source: Annual Reports of First Bank Nigeria Plc (2009-2012)

### SKYE BANK PLC

<b>Working Capital</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	100106.00	1	25.0	25.0	25.0
	102452.00	1	25.0	25.0	50.0
	103544.00	1	25.0	25.0	75.0
	106894.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
<b>Equity/Debts</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	592916.00	1	25.0	25.0	25.0
	692815.00	1	25.0	25.0	50.0
	914266.00	1	25.0	25.0	75.0
	1073828.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
<b>Earnings Before Interest and Tax</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2842.00	1	25.0	25.0	25.0
	11823.00	1	25.0	25.0	50.0
	12732.00	1	25.0	25.0	75.0
	16510.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
<b>Retained Earnings/Reserves</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	42845.00	1	25.0	25.0	25.0
	97302.00	1	25.0	25.0	50.0
	100963.00	1	25.0	25.0	75.0
	106056.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
<b>Net Operating Income from Sales</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	45157.00	1	25.0	25.0	25.0
	52798.00	1	25.0	25.0	50.0
	56704.00	1	25.0	25.0	75.0
	56724.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

Source: Annual Reports of Skye Bank Plc (2009-2012)\

### ZENITH BANK PLC

<b>Working Capital</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	345891.00	1	25.0	25.0	25.0
	372190.00	1	25.0	25.0	50.0
	394268.00	1	25.0	25.0	75.0
	462956.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

<b>Equity/Debts</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	692815.00	1	25.0	25.0	25.0
	914266.00	1	25.0	25.0	50.0
	1073828.00	1	25.0	25.0	75.0
	1666916.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
<b>Earnings Before Interest and Tax</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	42304.00	1	25.0	25.0	25.0
	50114.00	1	25.0	25.0	50.0
	67440.00	1	25.0	25.0	75.0
	102100.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
<b>Retained Earnings/Reserves</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	51170.00	1	25.0	25.0	25.0
	64826.00	1	25.0	25.0	50.0
	75072.00	1	25.0	25.0	75.0
	130153.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
<b>Net Operating Income from Sales</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	193286.00	1	25.0	25.0	25.0
	243948.00	1	25.0	25.0	50.0
	279307.00	1	25.0	25.0	75.0
	307082.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

Source: Annual Reports of Zenith Bank Plc (2009-2012)

**STANBIC IBTC PLC**

<b>Working Capital</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	64188.00	1	25.0	25.0	25.0
	69724.00	1	25.0	25.0	50.0
	77428.00	1	25.0	25.0	75.0
	81497.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
<b>Equity/Debts</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1666719.00	1	25.0	25.0	25.0
	1802230.00	1	25.0	25.0	50.0
	2416684.00	1	25.0	25.0	75.0
	2503302.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
<b>Earnings Before Interest and Tax</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3952.00	1	25.0	25.0	25.0
	4829.00	1	25.0	25.0	50.0
	5994.00	1	25.0	25.0	75.0
	13528.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
<b>Retained Earnings/Reserves</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	60.30	1	25.0	25.0	25.0
	62.31	1	25.0	25.0	50.0
	68.10	1	25.0	25.0	75.0
	71.10	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
<b>Net Operating Income from Sales</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	40627.00	1	25.0	25.0	25.0
	45464.00	1	25.0	25.0	50.0
	46728.00	1	25.0	25.0	75.0
	52728.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

Source: Annual Reports of Stanbic IBTC Plc (2009-2012)

**GUARANTEE TRUST BANK PLC**

<b>Working Capital</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	33425068.00	1	25.0	25.0	25.0
	34426890.00	1	25.0	25.0	50.0
	35066824.00	1	25.0	25.0	75.0
	35661246.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
<b>Equity/Debts</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	86455008.00	1	25.0	25.0	25.0
	92466001.00	1	25.0	25.0	50.0
	106624112.00	1	25.0	25.0	75.0
	107145522.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
<b>Earnings Before Interest and Tax</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	48455.80	1	25.0	25.0	25.0
	62080.20	1	25.0	25.0	50.0
	103027.90	1	25.0	25.0	75.0
	107091.30	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
<b>Retained Earnings/Reserves</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	38346.60	1	25.0	25.0	25.0
	47803.10	1	25.0	25.0	50.0
	86868.90	1	25.0	25.0	75.0
	90024.00	1	25.0	25.0	100.0
	Total	4	100.0	100.0	
<b>Net Operating Income from Sales</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	37916.30	1	25.0	25.0	25.0
	51203.70	1	25.0	25.0	50.0
	86958.10	1	25.0	25.0	75.0
	89599.10	1	25.0	25.0	100.0
	Total	4	100.0	100.0	

**Source: Annual Reports of GTB Plc (2009-2012)**

### TEST OF RESEARCH HYPOTHESES

In all, there are two hypotheses, which are to be tested, and in doing so, SPSS version 17.0, specifically regression, is employed, with a value of 0.05 (level of significance) that corresponds to a 95% confidence level. Therefore, all tables presented are SPSS analysis outputs.

#### Hypothesis One

**H<sub>0</sub>:** There is no significant relationship between trends in liquidity ratio and the profitability of the firm.

#### Hypothesis Two

**H<sub>0</sub>:** There is no significant relationship between liquidity and profitability of the firm.

#### Hypothesis Three

**H<sub>0</sub>:** There is no significant relationship between insolvency and the profitability of the firm.

The Z-score analyzed is presented below:

The Z-score model developed by Edward I. Altman [4] is a quantitative balance sheet method of determining a company's financial health. Altman's model used the following equation:

$$Z = 0.012(X_1) + 0.014(X_2) + 0.033(X_3) + 0.006(X_4) + 0.999(X_5)$$

Where, X<sub>1</sub>= Working capital/Total assets %

X<sub>2</sub>= Retained Earnings/Total assets %

X<sub>3</sub>= Earnings before interest and taxes/Total assets %

X<sub>4</sub>= Market value equity/Book value of total debt %

$$X_5 = \text{Sales/Total assets (times)}$$

Here are the rules for interpreting the Z score.

When Z is  $\geq 3.0$ , the firm is most likely safe based on the financial data.

When Z is 2.7 to 3.0, the company is probably safe from bankruptcy, but this is in the grey area and caution should be taken

When Z is 1.8 to 2.7, the company is likely to be bankrupt within 2 years

When Z is  $\leq 1.8$ , the company is highly likely to be bankrupt.

However many users of the formula preferred it in this form:

$$Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 1.0X_5$$

This is a preference for using 0.10 for 10% for the first four variables ( $X_1$ - $X_4$ ) and rounding 0.999 to 1.0 for  $X_5$ .

## Z-SCORE ANALYSIS

### FIRST BANK NIGERIA PLC

$$Z = 0.012(X_1) + 0.014(X_2) + 0.033(X_3) + 0.006(X_4) + 0.999(X_5)$$

	W.C	R.E	EBIT	Eq/D	NOI/S
2009=					
		0.012(33.20) + 0.014(60.09) + 0.033(26.14) + 0.006(20.47) + 0.999(15.49)			
		0.3984 + 0.84126 + 0.86262 + 0.12282 + 15.49 = <b>17.7151</b>			
2010=					
		0.012(56.01) + 0.014(31.97) + 0.033(17.68) + 0.006(18.42) + 0.999(36.91)			
		0.67212 + 0.44758 + 0.58344 + 0.11052 + 36.87 = <b>38.68366</b>			
2011=					
		0.012(62.68) + 0.014(28.94) + 0.033(17.09) + 0.006(14.10) + 0.999(39.98)			
		0.75216 + 0.40516 + 0.56397 + 0.0846 + 39.940 = <b>41.74589</b>			
2012=					
		0.012(76.06) + 0.014(19.67) + 0.033(0.76) + 0.006(11.45) + 0.999(46.84)			
		0.91272 + 0.27538 + 0.02508 + 0.0687 + 46.793 = <b>48.07488</b>			

Where: W.C= Working Capital

R.E= Retained Earnings

EBIT= Earnings before Interest and Tax

Eq/D= Equity/Debt

NOI/S=Net Operating Income/sales

## DECISION

From the analysis above, the Z-Scores for 2009, 2010, 2011, 2012 are 17.7151, 38.68366, 41.74589, and 48.07488 respectively are  $> 3.0$ , the firm is most likely safe based on the financial data.  $Z_{cal}$  17.7151, 38.68366, 41.74589, and 48.07488 respectively are  $> Z_{tab}$  3.0, we therefore reject  $H_0$  and therefore there is no significant relationship between trends in liquidity ratio and the profitability of the firm, and there is no significant relationship between liquidity and profitability of the firm. Also, there is no significant relationship between insolvency and the profitability of the firm.

## SKYE BANK PLC

$$Z = 0.012(X_1) + 0.014(X_2) + 0.033(X_3) + 0.006(X_4) + 0.999(X_5)$$

	W.C	R.E	EBIT	Eq/D	NOI/S
2009=					
		0.012(10.25) + 0.014(4.29) + 0.033(11.82) + 0.006(59.29) + 0.999(56.70)			
		0.123 + 0.06006 + 0.39006 + 0.35574 + 56.6433 = <b>57.57216</b>			
2010=					
		0.012(10.35) + 0.014(10.09) + 0.033(12.73) + 0.006(69.28) + 0.999(52.80)			
		0.1242 + 0.14126 + 0.42009 + 0.41568 + 52.7472 = <b>53.84843</b>			
2011=					
		0.012(10.01) + 0.014(9.73) + 0.033(2.84) + 0.006(91.43) + 0.999(45.20)			
		0.12012 + 0.13622 + 0.09372 + 0.54858 + 45.1548 = <b>46.05344</b>			
2012=					
		0.012(10.69) + 0.014(10.62) + 0.033(16.51) + 0.006(10.74) + 0.999(56.70)			
		0.12828 + 0.14868 + 0.54483 + 0.06282 + 56.6433 = <b>57.52791</b>			

Where: W.C= Working Capital

R.E= Retained Earnings

EBIT= Earnings before Interest and Tax

Eq/D= Equity/Debt

NOI/S=Net Operating Income/sales

**DECISION**

From the analysis above, the Z-Scores for 2009, 2010, 2011, 2012 are 57.57216, 53.84843, 46.05344, and 57.52791 respectively are  $> 3.0$ , the firm is most likely safe based on the financial data.  $Z_{cal}$  57.57216, 53.84843, 46.05344, and 57.52791 respectively are  $> Z_{tab}$  3.0, we therefore reject  $H_0$  and therefore there is no significant relationship between trends in liquidity ratio and the profitability of the firm, and there is no significant relationship between liquidity and profitability of the firm. Also, there is no significant relationship between insolvency and the profitability of the firm.

**ZENITH BANK PLC**

$$Z = 0.012(X_1) + 0.014(X_2) + 0.033(X_3) + 0.006(X_4) + 0.999(X_5)$$

	W.C	R.E	EBIT	Eq/D	NOI/S
<b>2009=</b>	0.012(34.76) + 0.014(5.12) + 0.033(4.23) + 0.006(16.67) + 0.999(27.93)				
	0.41712 + 0.07168 + 0.13959 + 0.10002 + 27.90207 = <b>28.63048</b>				
<b>2010=</b>	0.012(37.22) + 0.014(6.48) + 0.033(5.01) + 0.006(19.06) + 0.999(19.33)				
	0.44664 + 0.09072 + 0.16533 + 0.11436 + 19.31067 = <b>20.12772</b>				
<b>2011=</b>	0.012(39.44) + 0.014(7.51) + 0.033(6.74) + 0.006(23.26) + 0.999(24.39)				
	0.47328 + 0.10514 + 0.22242 + 0.13956 + 24.36561 = <b>25.30601</b>				
<b>2012=</b>	0.012(46.30) + 0.014(13.02) + 0.033(10.21) + 0.006(26.05) + 0.999(30.71)				
	0.5556 + 0.18228 + 0.33693 + 0.1563 + 30.67929 = <b>31.9104</b>				

Where: W.C= Working Capital

R.E= Retained Earnings

EBIT= Earnings before Interest and Tax

Eq/D= Equity/Debt

NOI/S=Net Operating Income/sales

**DECISION**

From the analysis above, the Z-Scores for 2009, 2010, 2011, 2012 are 28.63048, 20.12772, 25.30601, and 31.9104 respectively are  $> 3.0$ , the firm is most likely safe based on the financial data.  $Z_{cal}$  28.63048, 20.12772, 25.30601, and 31.9104 respectively are  $> Z_{tab}$  3.0, we therefore reject  $H_0$  and therefore there is no significant relationship between trends in liquidity ratio and the profitability of the firm, and there is no significant relationship between liquidity and profitability of the firm. Also, there is no significant relationship between insolvency and the profitability of the firm.

**STANBIC IBTC BANK PLC**

$$Z = 0.012(X_1) + 0.014(X_2) + 0.033(X_3) + 0.006(X_4) + 0.999(X_5)$$

	W.C	R.E	EBIT	Eq/D	NOI/S
<b>2009=</b>	0.012(8.15) + 0.014(71.1) + 0.033(13.53) + 0.006(16.67) + 0.999(40.63)				
	0.0978 + 0.9954 + 0.44649 + 0.10002 + 40.58937 = <b>42.22878</b>				
<b>2010=</b>	0.012(7.74) + 0.014(68.1) + 0.033(0.59) + 0.006(18.02) + 0.999(46.73)				
	0.09288 + 0.9534 + 0.01947 + 0.10812 + 46.68327 = <b>47.85714</b>				
<b>2011=</b>	0.012(6.97) + 0.014(60.3) + 0.033(0.48) + 0.006(24.16) + 0.999(45.46)				
	0.08364 + 0.8442 + 0.01584 + 0.14496 + 45.41454 = <b>46.50318</b>				
<b>2012=</b>	0.012(6.42) + 0.014(62.31) + 0.033(0.39) + 0.006(25.03) + 0.999(52.73)				
	0.07704 + 0.87234 + 0.01287 + 0.15018 + 52.67727 = <b>53.7897</b>				

Where: W.C= Working Capital

R.E= Retained Earnings

EBIT= Earnings before Interest and Tax

Eq/D= Equity/Debt

NOI/S=Net Operating Income/sales

**DECISION**

From the analysis above, the Z-Scores for 2009, 2010, 2011, 2012 are 42.22878, 47.85714, 46.50318, and 53.7897 respectively are  $> 3.0$ , the firm is most likely safe based on the financial data.  $Z_{cal}$  42.22878, 47.85714, 46.50318, and 53.7897 respectively are  $> Z_{tab}$  3.0, we therefore reject  $H_0$  and therefore there is no significant relationship between trends in liquidity ratio and the profitability of the firm, and there is no significant relationship between liquidity and profitability of the firm. Also, there is no significant relationship between insolvency and the profitability of the firm.



**GUARANTEE TRUST BANK (GTB) PLC**

$$Z = 0.012(X_1) + 0.014(X_2) + 0.033(X_3) + 0.006(X_4) + 0.999(X_5)$$

	W.C	R.E	EBIT	Eq/D	NOI/S
<b>2009=</b>	0.012(33.43)	+ 0.014(38.35)	+ 0.033(48.46)	+ 0.006(106.62)	+ 0.999(37.92)
	0.40116 + 0.5369 + 1.59918 + 0.63972 + 37.88208 = <b>41.05904</b>				
<b>2010=</b>	0.012(34.43)	+ 0.014(47.80)	+ 0.033(62.08)	+ 0.006(107.15)	+ 0.999(51.20)
	0.41316 + 0.6692 + 2.04864 + 0.6429 + 51.1488 = <b>54.9227</b>				
<b>2011=</b>	0.012(35.07)	+ 0.014(86.87)	+ 0.033(103.03)	+ 0.006(86.46)	+ 0.999(86.96)
	0.42084 + 1.21618 + 3.39999 + 0.51876 + 86.87304 = <b>92.42872</b>				
<b>2012=</b>	0.012(35.66)	+ 0.014(90.02)	+ 0.033(107.09)	+ 0.006(92.47)	+ 0.999(89.60)
	0.42792 + 1.26028 + 3.53397 + 0.55482 + 89.5104 = <b>95.28739</b>				

Where: W.C= Working Capital

R.E= Retained Earnings

EBIT= Earnings before Interest and Tax

Eq/D= Equity/Debt

NOI/S=Net Operating Income/sales

**DECISION**

From the analysis above, the Z-Scores for 2009, 2010, 2011, 2012 are 41.05904, 54.9227, 92.42872, and 95.28739 respectively are > 3.0, the firm is most likely safe based on the financial data.  $Z_{cal}$  41.05904, 54.9227, 92.42872, and 95.28739 respectively are >  $Z_{tab}$  3.0, we therefore reject  $H_0$  and therefore there is no significant relationship between trends in liquidity ratio and the profitability of the firm, and there is no significant relationship between liquidity and profitability of the firm. Also, there is no significant relationship between insolvency and the profitability of the firm.

**CONCLUSION**

The study examined the issue of “the impact of using accounting ratios as a tool for measuring performance (First Bank Nigeria Plc, Skye Bank Plc, Zenith Bank Plc and Stanbic IBTC and Guaranty Trust Bank Nigeria Plc)”. From the data and information collected scientifically tested and analyzed in the course of the research the following conclusions can be deduced from the study that there is a significant relationship between trends in liquidity ratio and the profitability of the firm and there is a significant relationship between liquidity and profitability of the firm. Also, there is no significant relationship between insolvency and the profitability of the firm.

The paper recommends analyzing organization financial data in order to reveal performance of the organization. Proper regulation guiding financial performance should be introduced into the banking sector. The management of Nigerian banks should work very hard to optimize the financial performance of their banks in order to increase the returns on equity, assets and investment.

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