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THE IMPACT OF CAPITAL STRUCTURE ON THE PERFORMANCE OF BANKING INDUSTRY

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Abstract

Capital structure has been found to have impact on bank performance. Bank consolidation in Nigeria has increased bank equity capital against debt. This study aims to determine the impact of capital structure on the performance banking industry. The study used profit after tax as a dependent variable and three capital structure variables (liquidity, interest rate and bond) as independent variables. The sample for the study consists of four (4) Nigerian banks quoted on the Nigerian Stock exchange (NSE) Union Bank, First Bank, UBA, and Zenith Bank and period of nine (9) years from 2006 to 2015. The required data and information for the study were gathered from published annual reports. Ordinary least square regression analysis of secondary data shows that capital structure has a positive relationship with the financial performance of Nigeria quoted banks. This suggests that the management of quoted banks in Nigeria consistently use liquidity, interest rate and debt to improve earnings.

Keywords: Capital structure, debt and equity, financial performance.

Introduction

Recent developments in the global economy coupled with the financial crisis and credit crunch in the last decade has made researchers developed further interests in studying the banking sector. Furthermore, due to the increasing spate of globalization, the effect of these incidents have trickled down into the African banking sector hence banks in Africa have been influenced by the changing nature of banking services worldwide (Ahmed & Rehman, 2008). Irrespective of such developments, banks are graded on the basis of their profitability, liquidity, branch network and customer service. As the main functions of banks is to accumulate surplus funds and make them available to deficit sectors of the economy, they make profits through lending and borrowing activities hence, the bigger the size of the bank, the higher the expenditure. However, competition in the banking sector has tightened due to technological advancements and major changes in the financial and monetary environment of banks (Spathis et al., 2002). Since studies have showed an existing relationship between capital structure and bank profitability, there is the need for banks to determine their optimal capital structure to maximise their profitability and minimize losses in order to withstand the competition.

Capital structure refers to the firm's financing mix mainly debt and equity used to finance the firm. The ability of banks to carry out their stakeholders' needs is tightly related to capital structure. Capital structure, in financial terms, means the way a firm finances its assets through the combination of equity and debt (Saad, 2010). Since the seminal work of Modigliani and Miller (1958), capital structure studies have become an important subject matter in finance theory. How a firm is been finance is of great importance to both the managers of the firm and the providers of capital. This is due to the fact that, a wrong mix of finance employed can affect the performance and survival of the firm. This

study wants to contribute to the capital structure debate on the relationship between capital structure and bank performance. This study seeks to answer the question of whether capital structure affects banks performance.

Problem Statement

The government and the private sector have invested heavily in creating an enabling environment for doing business in Nigeria and, indeed, some companies have performed exceedingly well as a result. Several companies, however, are experiencing declining performance and some have even been delisted from the NSE in the last decade. Momentous efforts to revive the ailing and liquidating companies have focused on financial restructuring. However managers and practitioners still lack adequate guidance for attaining optimal financing decisions (Kibet,Kibet,Tenei & Mutwol, 2011) yet many of the problems experienced by the companies put under statutory management were largely attributed to financing (Chebii, Kipchumba & Wasike ,2011). This situation has led to loss of investors' wealth and confidence in the stock market. In both developed and developing countries, there has been an argument on the effect of capital structure of a firm on the firm's performance (Nwankwo, 2014). Akee (2014) stated that financial constraints have been a major factor affecting corporate firm's performance in developing countries especially Nigeria. The microeconomic environment has not been conducive for business, while both monetary and fiscal policies of government have not been stable. Numerous studies have examined the importance of this vital sector to the economic growth of Nigeria.

Onwumere, Onadugo and Imo (2013) stated that total financial structure has positive and significant effect on economic growth in Nigeria. Other studies have also tried the effect of capital structure on firm's performance. A study by Patrick, Joseph and Kemi (2013) found appositive relationship between return on investment and leverage. Dare and Sola (2010) found that there was positive relationship between earning per share and leverage ratio on one hand, and also a positive relationship between dividend per share and leverage ratio. Since none of the available literature on capital structure has actually addressed the issue of its effect on the Nigerian banks, this study therefore, is centered on the effect of capital structure on the performance of the Nigerian banks quoted on the floor of the Nigerian stock exchange. Studies on the relationship between various financing decisions and performance have produced mixed results. It is against this background that this study was carried out.

Objectives

- To explore the relationship between liquidity and profit after tax.
- To identify relationship between interest rate and profit after tax.
- To find out relationship between bond and profit after tax.

Research Questions

- What is the relationship between liquidity and profit after tax?
- What is the relationship between interest rate and profit after tax?
- What is the relationship between bond and profit after tax?

Research Hypothesis

H0: There is no significant relationship between liquidity and profit after tax.
H1: There is significant relationship between liquidity and profit after tax.
H0: There is no significant relationship between interest rate and profit after tax.
H1: There is significant relationship between interest rate and profit after tax.
H0: There is no significant relationship between bond and profit after tax.
H1: There is significant relationship between bond and profit after.

Literature Review

Conceptual Framework

Modern studies on capital structure theory dated back to more than fifty decades ago when Modigliani and Miller (1958), from now on MM, published their seminar work. They proved that, under certain assumptions (existence of perfect market and the absence of taxes and transaction costs), costs of capital does not affect capital structure. That is; debt in a firm's capital structure does not affect the firm's value. This theory is normally referred to as irrelevant theory.

Later, Modigliani and Miller (1963) modified the irrelevant theory by presenting proof that cost of capital affect capital structure and thus the value of the firm when the assumptions that there are no taxes or transaction cost were removed. They then opined that borrowing give a tax advantage, where the tax deducted from the interest results in tax shields, which in turn reduces the cost of borrowing and maximizes the firm performance (Miller, 1977). This requires the firm to make a trade- off between the cost of debt and the benefits of using debt. Several studies shed light on the specific characteristics of firms and industries that determine leverage ratios. These studies agree that leverage increases with fixed assets, non-debt tax shields, growth opportunities, and firm size and decreases with volatility, advertising expenditures, research and development expenditures, bankruptcy probability, profitability and uniqueness of the product.

Bauer (2004), using the data available studied the effect of the following on capital structure; size, profitability, tangibility, growth opportunities, tax, non-debt tax shields, volatility, and industry classification. He concluded that leverage is positively correlated with size while leverage is negatively correlated with profitability. There was also a negative relation between tangibility and leverage. The relationship between leverage and P/B ratio (Proxy for growth opportunities) is negative which means that firms with higher future growth opportunities should use more of equity financing. It was discovered that leverage is positively correlated with tax and it is negatively correlated with non-debt tax shields. No relationship was found between leverage and volatility.

A firm's capital structure may evolve as a result of deliberate plan by the firm's managers while at other times it is as a result of the combination of situation in which the firm had to deal with in the past. Some firms are not able to access banks loan (Kamsvag, 2001)25 while some have enough retained earnings to undertake their investment opportunities without resulting to debt financing (Anderson, et al, 2006). Some firms, in principle, do not want to undertake any debt (Anderson and Williamson, 2001). However, there are several other factors that have been suggested by scholars as determinants of firm's capital structure. Peterson and Rajan (1994) argued that business size, age and cash flow are relevant factors. Olowe (2011) opined that "in other to maximize shareholders' wealth, the practical factors a financial manager should consider in the choice of capital structure include: business risk, nature of the firm's assets, growth rates of the firm, stability of sales, profitability, taxes, control, management attitudes, lender and rating agency attitudes, conditions in the stock market, perceived undervaluation of equity shares in the Stock market, and reserve borrowing capacity".

In addition to the concerns about EPS, value and cash flow, Pandey (2010) noted that in practice capital structure decision involve considerations of assets, growth opportunities, debt and non-debt tax shields, financial flexibility and operating strategy, loan covenants, financial slack, sustainability and feasibility, control, marketability and timing, issue costs and capacity of raising funds. Huang and Song (2002), posited that theoretical and empirical studies have shown that profitability, tangibility, tax, size, non-debt tax shields, growth opportunities volatility, and so on affect capital structure. They went further to say "on the relationship between these factors and companies' capital

Theoretical Framework

Trade-Off Theory of Capital Structure: The trade-off theory of capital structure states that a firm's choice of its debt – equity ratio is a trade-off between its interest tax shields and the costs of financial distress. The trade-off theories suggest that firms in the same industry should have similar or identical debt ratios in order to maximize tax savings. The tax benefit among other factors makes the after-tax cost of debt lower and hence the weighted average cost of capital will also be lower. Brigham and Gapenski (1996) argue that an optimal capital structure can be obtained if there exist tax benefit which is equal to the bankruptcy cost. It can be concluded that, there is an optimal capital structure where the weighted average cost of capital is at its minimum.

However, as a firm leverage ratio rises, tax benefits will eventually be offset by increases bankruptcy cost. The trade-off theory sought to establish an optimal capital structure where the weighted average cost of capital will be minimized and the firm value maximized. At the optimal level of capital structure, tax benefit will be equal to bankruptcy costs. Despite the theoretical appeal of debt financing, researchers of capital structure have not found the optimal capital structure (Simerly& Li, 2002).

Agency Theory of Capital Structure: The agency cost theory of capital structure emanates from the principal-agent relationship (Jensen and Meckling, 1976). In order to moderate managerial behavior, debt financing can be used to mediate the conflict of interest which exists between shareholders and managers one hand and also between shareholder

and bondholders on the other hand. The conflict of interest is mediated because managers get debt discipline which will cause them to align their goals to shareholders goals.

Jensen and Meckling (1976) and Jensen and Ruback (1983) argue that, managers do not always pursue shareholders interest. To mitigate this problem, the leverage ratio should increase (Pinegar and Wilbricht, 1989). This will force the managers to invest in profitable ventures that will be of benefit to the shareholders. If they decide to invest in non-profit tax businesses or investment and are not able to pay interest on debt, then the bondholders will file for bankruptcy and they will lose their jobs. The contribution of the Agency cost theory is that, leverage firms are better for shareholders as debt can be used to monitor managerial behavior (Boodhoo, 2009). Thus, higher leverage is expected to lower agency cost, reduce managerial inefficiency and thereby enhancing firm and managerial performance (Jensen 1986, Koehhar 1996, Aghion, Dewatnipont and Rey, 1999).

Pecking Order Theory of Capital Structure: From the foregoing analysis, the focus on the use of debt has been on only the economic gains and benefits of the formation of optimal capital structure. The pecking order theory is geared towards the signaling effect of the use of debt financing. According to the pecking order theory firms prefer financing their operations from internally generated funds, because the use of such funds does not send any negative signal that may lower the stock price of the firm. If internal finance is required, firms prefer to issue debt first before considering the issue of equity. This pecking order occurs because issuing debt is less likely to send a negative signal to investors. If a firm should issue equity it sends a negative signal to investors that the firm's share prices are overvalued that is why the managers are issuing equity. This will cause investor to sell their shares leading to a fall in the stock price of the firm. A share issue is thus interpreted by the market as a bad omen but debt is less likely to be interpreted this way. Firms therefore prefer to issue debt rather than equity if internal finance is insufficient. The pecking order theory is therefore a competing theory of capital structure that says firms prefer internal financing.

Empirical Framework

Many studies have developed theoretical frameworks and conducted empirical tests to explain how firms chose between debt and equity and their relative proportion in firm financing (Baker and Wurgler, 2007), (Meier and Tarhan, 2007), and (Dittmar and Thakor, 2007). Others like Guedes and Opler, (1996) and Krishnaswami, Spindt, and Subramanian (1999) analyse debt issues from the perspective of agency theory and costs stemming from moral hazard problems. The point is that debt, arguably, can resolve agency problems between the shareholders and bondholders on one hand, and shareholders and managers on the other (Jensen and Meckling, 1976 and Jensen, 1986). Managers are believed to have no option other than being efficient where their organizations are significantly leveraged. This implies that firms leverage level can constrain and monitor managerial behaviour. Moreover, the use debt financing do not dilute shareholders voting right. The use of debt financing has the potential of increasing the risk of financial distress. The use of debt financing minimizes the problem of adverse selection unlike equity financing (Meier and Tarhan, 2007).

Some studies have concluded that the relationship between capital structure and firm performance is both positive and negative (Tian,et.al,) 2007;Tsangyaa,et.al.2009; Saeedi and Mahmoodi,2011;Abor,2005;Oke and Afolabi,2008),others concluded that the relationship is negative (Narendar,et.al.2007; Pratheepkanth, 2011;Shah,et.al.2011; Onaolapo and Kajola, 2010).Yet,other studies have documented a positive relationship (Shoaib and Siddiqui,2011; Aman,2011; Chowdhury and Chowdhury,2010; Omorogie and Erah, 2010; Akintoye, 2008).With these mixed and conflicting results, the quest for examining the relationship between capital structure and firm performance has remained a puzzle and empirical study continues. Empirical evidence shows that there is a positive relationship between the size of a firm and its capital structure (see Barclay and Smith 1996, Friend and Lang, 1988, Hovakimian et al, 2004). Their analysis indicates that smaller firms are likely to finance their operations by equity rather than debt.

Asset Tangibility: Asset tangibility is considered to be one of the most significant determinants of firm's performance. According to the literature there exist a positive relationship between asset tangibility and a firms debt ratio, that is, the more tangible assets the firms has, the more leverage it is. This is because if firms have more tangible assets which it can easily convert into cash, it can increase it debt ratio since it can service the debt through its tangible assets in the event of liquidation.

Mackie-Mason (1990) concluded that a firm that has more tangible assets in its asset base is likely to choice debt and this will affect the firm's performance. Firm that invest more of its retained earnings in tangible assets will have low bankruptcy cost and financial distress that firms that relies on intangible assets Akintoye (2008).

Based on the above argument the relationship between asset tangibility and firm's performance is expected to be positive.It is believed that more debt will be used if firms have more tangible assets serve to as collateral (Wedig et al. 1988). By using the firm's assets as collateral the cost associated with adverse selection and moral hazards are reduced. This will result into firms with greater asset liquidation value having more access to debt at low cost than firms that have intangible assets. It is also suggested that bank funding will depend on whether its lending can be secured by tangible assets (Storey 1994; Berger and Udell 1998).

Empirical evidence suggests that, there is positive relationship between asset tangibility and debt ratio of firms and this is consistent with theory (Bradley et al. 1984: Wedig et al 1988: Friend and Lang 1988, Mackie-Mason 1990: Rajan and Zingales 1995). Marsh (1982) also maintain that firms that have tangible asset are more likely to issue equity since few tangible assets implies that they cannot provide collateral.

Profitability: The pecking order theory of capital structure seems to suggest that there is a negative relationship between a firm's capital structure and profitability. Murinde et al (2004) observe that retained earnings are the principal source of finance. According to Titman and Wessels (1988) and Barton et al. (1989), firms that have higher profit would maintain a low debt ratio since they are able to generate those funds internally "all other things being equal". Evidence from empirical studies seems to support the pecking order theory. Most studies have found a negative relationship between profitability and capital structure (see Frend and Lang 1988, Barton et al 1998). Cassar and Holmes (2003), Esperanca et al, (2003) and Hall et al. (2004) also suggest a negative relationship.

Methodology

This study covers capital structure and the performance of banking industry in Nigeria, using Union Bank, First Bank, UBA and Zenith Bank as a study within the period 2006 – 2015. The data was sourced from the Annual reports of the banks under study. The dependent variable is Profit after Tax, and the independent variables are liquidity, interest rate and bond. The variables are tested using Ordinary Least Square regression method, Diagonostic test and ADF unit root test through E-View 3.1.

Given the above, we specify model:

PAT = F (LQT, INTR, BND) ----------(1)

Where

PAT = Profit after Tax (dependent variable)

LQT = Liquidity

INTR = Interest rate

BND = Bond

Thus, we transformed equ (1) into an econometric model, and presented as:

$PAT = a_0 + a_1LQT + a_2INTR + a_3BND + U_t$----------(2)

In case the variables were transformed, we rewrite the equation as:

$LnPAT = Ln_0 + a_1LnLQT + a_2LnINTR + a_3LnBND + U_t$------(3)

Where u_t is the error term

$a_1 – a_3$ are the proxies capital structure

Ln is the Log linearity

The a-priori expectation of the above equationalized variables are expected as follows:

$a_1, a_2, a_3, > 0$ ----------(4)

The signs in equation 4 shows that there will be a positive relationship between the endogenous variables and the exogenous variables.

Discussion of Result

The impact of capital structure on the performance of banking industry in Nigeria between 2006-2015 was analysed and the results were presented as follows:

Table 4.1: Ordinary Least Square (Ols) Output Result

Dependent Variable: PAT
Method: Least Squares
Date: 01/02/17 Time: 05:21
Sample(adjusted): 2006 2015
Included observations: 11 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LQR	0.000674	0.000243	2.779004	0.0273
INTR	0.023576	0.011331	2.080628	0.0760
BND	2.44E-06	2.02E-06	1.205825	0.2671
C	1996.495	1.782067	1120.325	0.0000
R-squared	0.929667	Mean dependent var		2005.000
Adjusted R-squared	0.899524	S.D. dependent var		3.316625
S.E. of regression	1.051303	Akaike info criterion		3.213226
Sum squared resid	7.736667	Schwarz criterion		3.357915
Log likelihood	-13.67274	F-statistic		30.84202
Durbin-Watson stat	2.693771	Prob(F-statistic)		0.000209

Source: E-View output 3.1

Estimation Equation

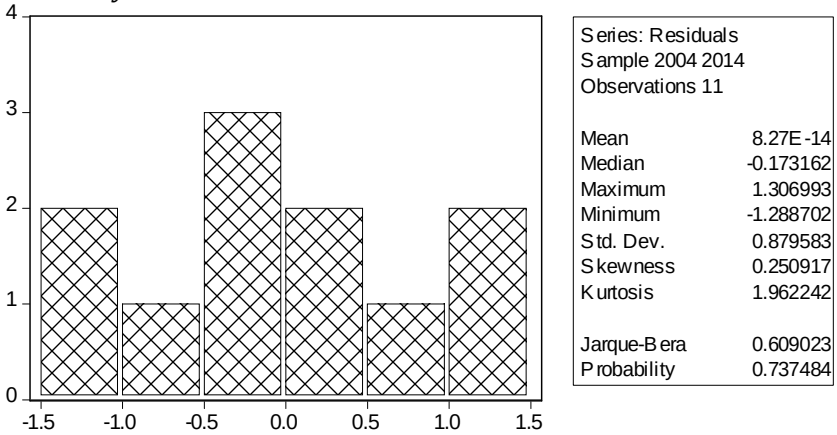
PAT=C(0)+C(1)LQT+C(2)INT+C(3)BND+C(4)
Source: E-View output 3.1

The OLS test tries to reveal the magnitude and significance condition of the series , the relative statistics of the estimated model shows that the three independents variables (LQT), (INT) and (BND) have positive relationship to the dependent variable (PAT), but only LQT is significantly related. This is revealed by the coefficient and probability values of the t-stats.

Globally, the R-squared is found to be 0.929667 which implies that , the independent variables are positively related to the dependent variable. The dependent variable (PAT) is explained by the independent variables (LQT, INT and BND) 89% level while 11% is unexplained which could be captured by error.

Diagnostic Test

A. Normality Test



Source: E-View output 3.1

B. Serial Correlation Test Langranger Multiplier

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.966979	Probability	0.490483
Obs*R-squared	4.624054	Probability	0.201488

Test Equation:
Dependent Variable: RESID
Method: Least Squares
Date: 01/02/17 Time: 05:25
Presample missing value lagged residuals set to zero.

Variable	Coefficiet	Std. Error	t-Statistic	Prob.
LQR	0.000194	0.000284	0.682203	0.5326
INTR	-1.71E-05	0.012002	-0.001421	0.9989
BND	-1.03E-06	3.32E-06	-0.311873	0.7707
C	-0.751406	1.879444	-0.399802	0.7097
RESID(-1)	-0.559358	0.763408	-0.732712	0.5044
RESID(-2)	-0.415715	0.728939	-0.570302	0.5990
RESID(-3)	0.463932	1.096643	0.423048	0.6940
R-squared	0.420369	Mean dependent var		8.27E-14
Adjusted R-squared	-0.449079	S.D. dependent var		0.879583
S.E. of regression	1.058822	Akaike info criterion		3.213317
Sum squared resid	4.484416	Schwarz criterion		3.466523
Log likelihood	-10.67324	F-statistic		0.483489
Durbin-Watson stat	2.479284	Prob(F-statistic)		0.796546

Source: E-View output 3.1

C. Heteroskedasticity Test

White Heteroskedasticity Test:

F-statistic	2.760114	Probability	0.172481
Obs*R-squared	8.859993	Probability	0.181606

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Date: 01/02/17 Time: 05:26
Sample: 2006 2015
Included observations: 11

Variable	Coefficiet	Std. Error	t-Statistic	Prob.
C	-4.320243	2.525267	-1.710806	0.1623
LQR	0.000917	0.000501	1.829633	0.1413
LQR^2	-6.90E-08	5.43E-08	-1.269640	0.2731
INTR	0.044495	0.030954	1.437430	0.2240
INTR^2	-0.000155	9.04E-05	-1.712203	0.1620
BND	1.02E-05	4.19E-06	2.437555	0.0714
BND^2	-9.76E-12	7.55E-12	-1.292053	0.2659
R-squared	0.805454	Mean dependent var		0.703333
Adjusted R-squared	0.513635	S.D. dependent var		0.723602
S.E. of regression	0.504639	Akaike info criterion		1.731181
Sum squared resid	1.018643	Schwarz criterion		1.984387
Log likelihood	-2.521493	F-statistic		2.760114
Durbin-Watson stat	1.800889	Prob(F-statistic)		0.172481

Source: E-View output 3.1

D. Stability Test

Ramsey RESET Test:

F-statistic	4.646501	Probability	0.074531
Log likelihood ratio	6.308190	Probability	0.012018

Test Equation:
Dependent Variable: PAT
Method: Least Squares
Date: 01/02/17 Time: 05:29
Sample: 2006 2015
Included observations: 11

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LQR	0.269102	0.124523	2.161060	0.0740
INTR	9.393802	4.346832	2.161068	0.0740
BND	0.000978	0.000453	2.161024	0.0740
C	397725.4	183577.6	2.166525	0.0734
FITTED^2	-0.099281	0.046056	-2.155650	0.0745

R-squared	0.960363	Mean dependent var	2005.000
Adjusted R-squared	0.933938	S.D. dependent var	3.316625
S.E. of regression	0.852459	Akaike info criterion	2.821572
Sum squared resid	4.360118	Schwarz criterion	3.002433
Log likelihood	-10.51865	F-statistic	36.34301
Durbin-Watson stat	2.506601	Prob(F-statistic)	0.000242

Source: E-View 3.1

Normality Test

The probability value of the Jarque-Bara statistics of 0.7374 is greater than 0.05 critical value, we can say that the residuals of the variables specified in this model are normally distributed. Base on the above figure, we accept the null hypothesis of normality assumption given that JB value is significant at 95% confidence level.

Serial Correlation Test

The Beusch-Godfrey serial correlation result above revealed that the probability value of the F-statistics of LM test is 0.490>0.05 critical value, we accept the null hypothesis that the series are not serially correlated and model is significant and fit for prediction.

Unit Root Test

A. Unit root test at level for pat

ADF Test Statistic	-1.904702	1% Critical Value*	-4.4613
		5% Critical Value	-3.2695
		10% Critical Value	-2.7822

*MacKinnon critical values for rejection of hypothesis of a unit root.

Lag truncation for Bartlett kernel: 2	(Newey-West suggests: 2)	
Residual variance with no correction		2.49E-28
Residual variance with correction		5.50E-28

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(PAT)
Method: Least Squares
Date: 01/02/17 Time: 05:36
Sample(adjusted): 2006 2015
Included observations: 10 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PAT(-1)	-5.50E-15	1.94E-15	-2.829983	0.0222

C	1.000000	3.90E-12	2.57E+11	0.0000
Mean dependent var	1.000000	S.D. dependent var		0.000000
S.E. of regression	1.77E-14	Sum squared resid		2.49E-27
Durbin-Watson stat	0.109296			

Source: E-View output 3.1

The Augmented Dicker Fuller test (ADF) at level 1(0) for PAT result is 1.9047<3.2695 at 0.05 level of significant, this shows no stationarity rather presence of unit root in the series.

B. Unit Root Test at Level for LQT

ADF Test Statistic	-0.863659	1% Critical Value*	-4.4613
		5% Critical Value	-3.2695
		10% Critical Value	-2.7822

*MacKinnon critical values for rejection of hypothesis of a unit root.
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LQT)
Method: Least Squares
Date: 01/02/17 Time: 05:31
Sample(adjusted): 2006 2014
Included observations: 9 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LQT(-1)	-0.222371	0.257476	-0.863659	0.4210
D(LQT(-1))	-0.610939	0.344116	-1.775386	0.1262
C	1761.486	1228.081	1.434340	0.2015

R-squared	0.456627	Mean dependent var	563.5635
Adjusted R-squared	0.275503	S.D. dependent var	1678.755
S.E. of regression	1428.913	Akaike info criterion	17.62842
Sum squared resid	12250746	Schwarz criterion	17.69416
Log likelihood	-76.32787	F-statistic	2.521072
Durbin-Watson stat	1.848434	Prob(F-statistic)	0.160433

Source: E-View output 3.1

The Augmented Dicker Fuller test (ADF) at level 1(0) for LQT result is 0.863 < 3.269 at 0.05 level of significant, this shows no stationarity rather presence of unit root in the series.

C. Unit Root Test at Level for INTR

ADF Test Statistic	-0.420494	1% Critical Value*	-4.4613
		5% Critical Value	-3.2695
		10% Critical Value	-2.7822

*MacKinnon critical values for rejection of hypothesis of a unit root.
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(INTR)
Method: Least Squares
Date: 01/17/17 Time: 05:34
Sample(adjusted): 2006 2014
Included observations: 9 after adjusting endpoints

Variable	Coefficiet	Std. Error	t-Statistic	Prob.
INTR(-1)	-0.125245	0.297853	-0.420494	0.6888
D(INTR(-1))	-0.281702	0.334186	-0.842950	0.4316
C	48.30596	65.43821	0.738192	0.4883

R-squared	0.145995	Mean dependent var	15.37778
Adjusted R-squared	-0.138673	S.D. dependent var	31.76066
S.E. of regression	33.89136	Akaike info criterion	10.14540
Sum squared resid	6891.747	Schwarz criterion	10.21114
Log likelihood	-42.65430	F-statistic	0.512860
Durbin-Watson stat	2.227193	Prob(F-statistic)	0.622847

Source: E-View output 3.1

The Augmented Dicker Fuller test (ADF) at level 1(0) for INT result is 0.420 < 3.2695 at 0.05 level of significant, this shows no stationarity rather presence of unit root in the series.

D. *Unit Root Test at Level for BND*

ADF Test Statistic	0.008433	1% Critical Value*	-4.4613
		5% Critical Value	-3.2695
		10% Critical Value	-2.7822

*MacKinnon critical values for rejection of hypothesis of a unit root.
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(BND)
Method: Least Squares
Date: 01/02/17 Time: 05:35
Sample(adjusted): 2006 2015
Included observations: 9 after adjusting endpoints

Variable	Coefficiet	Std. Error	t-Statistic	Prob.
BND(-1)	0.003470	0.411438	0.008433	0.9935
D(BND(-1))	0.209131	0.638716	0.327424	0.7545
C	59517.97	59517.64	1.000006	0.3559

R-squared	0.046710	Mean dependent var	73023.26
Adjusted R-squared	-0.271054	S.D. dependent var	139637.0
S.E. of regression	157428.1	Akaike info criterion	27.03253
Sum squared resid	1.49E+11	Schwarz criterion	27.09827
Log likelihood	-118.6464	F-statistic	0.146995
Durbin-Watson stat	2.023749	Prob(F-statistic)	0.866314

The Augmented Dicker Fuller test (ADF) at level 1(0) for BND result is 0.008 < 3.2695 at 0.05 level of significant, this shows no stationarity rather presence of unit root in the series.

Granger Causality Test

Pairwise Granger Causality Tests
Date: 01/02/17 Time: 07:55
Sample: 1 16
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
LQT does not Granger Cause PAT	15	6.07384	0.0023
PAT does not Granger Cause LQT		1.38585	0.3988
INTR does not Granger Cause PAT	15	1.00647	0.4332
PAT does not Granger Cause INTR		6.43945	0.0284
BND does not Granger Cause PAT	15	0.32492	0.6346
PAT does not Granger Cause BND		2.61232	0.2215

Source: E-view 3.1

Findings and Conclusion

Findings of this study shows that the correlation between bank financial performance(profit after tax) and liquidity is strong and positive at 2.77, also the correlation between bank financial performance(profit after tax) and interest rate is strong and positive at 2.08 and the correlation between bank performance(profit after tax) and bond is strong and positive at 1.20.The overall result shows that 92,9% of the variation in bank financial performance is explained by capital structure (liquidity, interest rate and bond). But only liquidity has significant relationship with bank performance (profit after tax). Therefore, we concluded that capital structure (liquidity, interest rate and bond) has a positive impact on the financial performance of banks in Nigeria.

Recommendation

To improve financial performance of banks in Nigeria:

The management of Nigerian banks' should consider liquidity as priority since it has positive impact on bank performance, banks should increase their liquidity level in order to have perpetual life in business so that they do not go bankrupt. And government should always make sure that interest rate should be stable in order to improve banks performance in Nigeria.

References

Abor J. (2008). "Determinants of capital structure of Ghanaian Firms". AERC research paper 176

Abor,J.(2005).The effect of capital structure on firm performance: an empirical analysis of listed firms in Ghana, *Journal of Risk Finance*,Vol.2, pp438-447.

Abreu, M. and Mendes V. (2000), Commercial Bank Interest Margins and Profitability: Evidence from Some EU Countries.

Aghion, P,Dewatripont,M and Rey,P(1999):"Competition, financial discipline and growth."Review of Economic Studies,66,pp825-852.

Akhavein, J.D., Berger, A.N., Humphrey, D.B., (1997). The effects of megamergers on efficiency and prices: evidence from a bank profit function. Finance and Economic Discussion Series9,Board of Governors of the Federal Reserve System.

Akintoye, I.R(2008): "Effect of capital structure on firms' performance: the Nigerian experience."*European Journal of Economics, Finance and Administrative Sciences*,10,pp233-243

Al-Sakran, S. (2001), Leverage determinants in the absence of corporate tax system: the case of non- financial publicly traded corporation in Saudi Arabia. Managerial Finance, 27, 58-86. Applied Economics, 29 (4), pp. 505-512

Bartholdy,J.andMateus C.(2008), Taxes and Corporate Debt Policy

Barton, S.L. Ned C.H and Sundaram S.(1989). "An empirical test of stakeholder theory predictions of capital". Financial Management, 18(1): 36–44.

Bashir, A. (2000), 'Assessing the Performance of Islamic Banks: Some Evidence from the Middle East', Paper Presented at the ERF 8th meeting in Jordan.

Bashir, A. and Hassan M. (2004), 'Determinants of Islamic Banking Profitability', ERF paper, 10th Conference.

Ben Naceur, S. and Goaied M. (2001), 'The Determinants of the Tunisian Deposit Banks Performance', Applied Financial Economics, 11(3), 317-19.

Deping, C. and Yongsheng C. (2011). "The relationship research between the corporate performance, ownership concentration and equity balance degree: empirical studies of small and medium-sized enterprise from 2007 to 2009". *Journal of Accounting Research*. Vol.1. Pp 38-43.

Fosu, S. (2013), "Capital structure, product market. Competition and firm performance: evidence from South Africa," University of Leicester, UK, Working paper No 13/11.

Frank, Z.M and Goyal, V.K (2003)," Testing the pecking order theory of capital structure," *Journal of Financial Economics*, Vol. 67, pp 217 -248.

Fruhan, W.E. (1979), Financial strategy in the creation, transfer and destruction of shareholder value, New York,

Hadlock, C. and James, C. (2002), "Do banks provide financial slack?" *Journal of Finance*, Vol 57; pp1383 420 Harris,

Huang, S. and Song, F. (2002), "The Financial and operating performance of China's newly listed H – firms", working paper. Retrieved from http://w.w.w.hiebs.hku.hk/working -paper.asp on 12th May, 2014

Irwim. Ghosh, C., Nag, R. and Sirmans, C. (2000), "The pricing of seasoned equity offerings: evidence from REITs", Real Estate Economics, Vol 28, pp 363 – 84.

Jensen, M.C and Mekling, W.H. (1976), "Theory of the firm: managerial behavior, agency costs and ownership structure". *Journal of Financial Economics* Vol 11, pp 305 – 360.

Jordan, J; Lowe, J. and Taylor, P. (1998).'Strategy and financial policy in UK small firms'.*Journal of Business Finance and Accounting*, January/March.Pp 1–27. Kakani, R., Biswatosh, S. and Reddy, V. (2011), "Determinants of financial performance of Indian corporate sector in the post liberalization era: an exploratory study", NSE Research Initiative paper No.5.

M. and Raviv, A (1990), "Capital Structure and the informational role of debt", *Journal of Finance* Vol 45, pp 321 – 349 He, T. (2013), "The Comparison of impact capital structure to corporate performance between Chinese and European listed firms. Master Thesis, Jonkoping International Business School.