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Capital Structure and Firm Performance in Nigerian-Listed Companies

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Abstract: a number of business failures have not been reported in Nigeria arising from inability to payback nor does service debts .This paper empirically investigate the relationship between capital structure and firm performance in the Nigerian listed firms. A sample of 30listed firms out of a population of 173 were examined from 2005 to 2014 using multiple regression tools. Two hypotheses were formulated and tested using descriptive statistics and an econometric panel data technique to analyze the gathered data. An insignificantly negative correlation was found between financial leverage and ROA on one hand and a significantly negative relationship between debt/equity mix and ROE on the other hand. It is therefore recommended that firms should use long term liabilities to finance firm's activities and mix debt/equity appropriately by ensuring that debt financing ratio is lower to enhance corporate performance and survival.

Keywords: *Capital Structure, Firm performance, Leverage, Return on asset and Return on equity.*

1. Introduction

The management of corporate organizations must make decisions regarding the capital structure because such decision will impact on the performance of the firms (Gill et al., 2009). Error in this area may lead to financial distress and even bankruptcy. Two schools of thought are more pronounced regarding optimal capital structure- Relevant and Irrelevant theories. The former sees capital structure as relevant believing that the optimal mix of debt and equity can minimize the overall cost of capital and maximize the value of the firm. The latter school pioneered by Modigliani and Miller even though under unrealistic assumptions argued that the worth of the firm is unaffected by financing decision because firm's value is a function of underlying profitability and investment risk (Baral & Stern, 2011; Van Horne James, 2002). In Nigeria today it is important that firms balance the choice of financing by considering the relationship between capital structure and financial performance because this is highly significant to their long-term survival. Even though financial leverage provides tax benefits to the firm, it also increases the uncertainty surrounding the firm ability to service its debt and obligations as at when due (Shubita & Alsawalhah, 2012). Many firms borrow without proper planning on how the debt will be serviced. In many of the firms, managers and practitioners lack guidance for attaining optimal financing decision (Kibeti, Kibeti, Tenei & Matidol, 2011). From observations many of the challenges encountered by listed companies are largely attributed to financing (Chebii, Kipchumba & Wasike, 2011). Despite this, insignificant attention has been paid to it in the past. Research in this area has only produced little empirical evidence focusing on capital structure in Nigerian corporate decisions. These explain why companies are folding up unannounced while others are taken over by creditors. This study aimed at bridging this gap. This paper investigates the relationship between financial leverage and profitability using data from selected publicly traded firms. It equally examines whether, financial leverage mix and financial performance are correlated in the Nigerian listed firms.

2. Literature Review

Debt and equity option has been a discussion subject dated back to the era when (Modigliani & Miller, 1958) argued that capital structure is unrelated to firm's value. However, this claim was reversed later to state that firm's value is maximized when debt is the only source of finance(Modigliani & Miller, 1963); Jiang et al., 2008). Different theories of capital structure abound in financial management literature. The net income approach was propounded in 1952 (Durand, 1952) stating that firm can increase its value or reduce capital cost with the use of debt . Net operating income approach though equally propounded by Durand is converse to the net income model. This approach argued that the firm's value and capital cost are not dependent on capital structure. Thus, mixing debt and equity capital judiciously cannot increase firm's value. These are two extreme approaches to capital structure. Solomon (1963) brought out an intermediate approach to the capital structure. This theory argues that firm's value increases to a certain level of debt capital and after then it tends to remain constant with a moderate use of debt capital, and ultimately the firm's value decreases (Solomon, 1963). Trade-off theory posits that the maximization of firm's value is attainable at an optimal level of capital structure. Whenever a firm has deviated from its optimum, it has several options. It will either be over-levered where it can retire debt or issue equity or under levered where it can repurchase shares or issue debt. For the fact that these actions are costly, altering the leverage ratio becomes burdensome, implying slower adjustment to optimal leverage. For instance, the debt marginal benefits will equal the marginal costs of debt and the maximization of firm's performance is achieved (Tang & Jang, 2007); Jiang et al., 2008). Debt is less expensive because it is tax deductible when compared with equity financing.

Pecking-order propounded by Myers (1984), Naimi, Nor, Rohami & Wan-Hussin (2010) and Iqbal et al. (2012) simply explains why companies behave the way they do in their financing decision. They claimed that firms will first exploit internal financing such as retained profits before considering external sources for rationality and safety, this is less expensive. To reduce asymmetric information and other financing costs, firms should first finance investments with retained earnings, then with safe debt (newly issued debt that is default-risk free), then with risky debt, and finally with equity (Myers, 1984; Ramakrishnan et al., 2015). If outside is needed, firms will first issue the safest security starting with debt, then possibly hybrid securities such as convertible bonds then perhaps equity as a last resort because investors consider equity riskier than debt. From observation, most profitable companies within an industry tend to have the least amount of leverage. According to Myers (1984), firms' concern should be with the future as well as the current financing costs. Possibilities abound for large investment firms to engage in low-risk capacity in order to avoid forfeiting future investments or financing them with new risky securities.

Finally, the **agency theory** of (Jensen & Meckling, 1976) claimed there is the existence of managers/stockholders personal interest conflict. Companies are established and financed by the owners with the intention of increasing their wealth through the financial performance of the firm. The achievement of this objective becomes complicated as the firm increases in size and scope and because such firm might not be managed directly by the owners, therefore there is a separation between the management and the owners. Then the interest of managers might not align with those of investors thereby leading to managers seeking self- interest. Jensen (1986) argued that managers will use available discretionary amount for perquisites. This relationship will lead to the agency problem with the associated agency cost. Again, as a result of the owners not having full information when a decision is made, may make it impossible for the owner to determine whether the manager is acting in the best interest of the firm or not. (Atrill & McLaney, 2009) also confirm the existence of agency problem even when the managers are out to take decisions that will optimize the owners' interest. In bid to optimize firm's value managers are confronted with the agency problem. For instance, to increase the return on investment the manager must expose the firm to high level of risk that might not be convenient to the owner. Consequently, solution can be offered to agency problems through capital structure decision, such as debt leverage increase. A positive correlation is assumed between leverage and firm performance in this theory.

The market timing theory of capital structure dwell on managers' consideration of time-varying relative costs of issuing debt and equity(Baker & Wurgler, 2002); (Graham & Harvey, 2001)(Hovakimian, Opler, & Titman, 2001);(Huang & Ritter, 2009); (Leary & Roberts, 2005); Myers, 1984). Firms change their debt/equity mix to take advantage of good prices from this market timing. Various authors have however, challenged the long continuance and the financial significance of this market timing(Alti, 2006);(Flannery & Rangan, 2006) .

Capital structure and firm performance: The combination of firm's debt (long-term and short term), common equity and preferred equity is known as capital structure and it is relevant to how a firm finances its overall operations and growth through the employment of different fund sources. Optimum capital structure simply mean a minimum weighted-average cost of capital that will maximize the firm's worth(San, Theng and

Heng, 2011). For the attainment of optimal capital structure therefore, numerous mixture of various securities will have to be issued.(Varcholova & Beslerova, 2013) claimed that capital structure and corporate performance are closely linked. De Jong & Zhejia (2013) claimed that capital structure and firm performance association is endogeneous. While (McConnell & Servaes, 1995) argued that Tobin's q is endogeneous and leverage exogeneous , Smith and Watts affirmed that leverage is endogeneous sand Tobin's q is exogeneous. This showed that capital structure decisions impact firm performance and firm performance also influences capital structure meaning that there is a bi-directional causal relationship. Capital structure and firm relationship was examined by Kinsman & Newman, (1999) they noted that capital structure choice(i.e. debt level) and firm's performance association is very significant because shareholders wealth being the primary goal of a manager cannot be maximized until this relationship is critically examined .In the same manner, the effect of capital structure in 64 Egyptian firms were regressed against their firm performances from1997 to 2005 by (El-Sayed Ebaid, 2009). A weak association was found between them. Abbadi and Abu-Rub (2012) studied the impact of market efficiency and capital structure on return on assets (ROA) and return on equity (ROE) in eight out of ten Palestinian financial institutions from 2007 to 2010. A negative effect was found between leverage and market value of the bank while market value, ROA and bank deposits to total deposits were found to be positive and strongly associated. (La Rocca, 2007)) and(Maghyereh, 2005)in their studies affirmed the link between firm's value and its capital structure. Both studies observed that the efficiency of firm's corporate governance policy could be influenced by the capital structure choice for instance; there could be a deliberate use of debt financing to reduce the information asymmetry problem (La Rocca, 2007). Akintoye (2008) studied the sensitivity of performance to capital structure on selected food and beverage companies in Nigeria. Significantly sensitive effects were found among performance indicators such as turnover, Earnings before Interest and Taxes, Earnings per Share, Dividend per Share, and the measures of leverage (Degree of operating leverage, Degree of Financial Leverage and Dividend per Share

Profitability: In line with Pecking-order theory, a significantly negative interplay was found between debt financing and profitability (Hamid, Abdullah, & Kamaruzzaman, 2015). Any viable firm that resolves to employ debt as its capital structure because of future profit must be subjected to the terms and conditions of the lenders. From this an inverse interplay is raised between profitability and leverage (Nadaraja et al, 2011). While trade-off hypothesis posit a direct association claiming that improved profit enhance debt usage with tax shield on interest payment pecking order suggests an inverse association between profitability and leverage. Toy, Stonehill, Remmers, Wright, and Beekhuisen (1974); Rajan and Zingales (1995) ; Silva Serrasqueiro and Rêgo Rogão (2009)equally supported this negative association empirically.

Leverage: A higher operating leverage in a firm promotes greater chance of corporate failure and a greater weight of bankruptcy cost on financing decisions. Fixed costs of production also affect capital structure and can increase the instability in future earnings over time. Agency and bankruptcy theories posit negative relation between operating leverage and debt level. The bankruptcy costs theory therefore, suggests a reduction on the debt level in capital structure once the operating leverage increases (Baral, 2004).

Research Design: This study uses sampled panel data confined to listed companies in the Nigerian stock Exchange from 2005 to 2014 a ten-year window period to enable an examination of trend analysis. 30 listed companies were selected from a population of 173 using judgmental sampling technique on the basis of data availability. Secondary data were sourced from the Facts Book of the Nigerian Stock Exchange (NSE) and the companies' financial statements from the period 2005 to 2014 hence data set contains detailed information about each firm.

Model Specification: Return on Equity (ROE) and Return on Assets (ROA) are the common indicators of performance proxies used (Gorton & Rosen, 1995), (Mehran, 1995),(Krishnan & Moyer, 1997), (Ang, Cole, & Lin, 2000)and Zeitun and Tian(2007). However, ROA is widely regarded as the most useful measure to test firm performance (Abdel Shahid, 2003), Zeitun and Tian (2007). The proxies (ROA and ROE) are adopted as Accounting Performance indices. Accordingly, a functional relationship between firms' Performance (PER) and the chosen explanatory variables (leverage, and size and tax)) is shown below:

PER = f (LEV, Debt/Equity Mix, PAT, Lag_Pat, S, Tax) ----------------------------- (1)

Where:

PER represents the different measures of performance (ROA, ROE)
LEV showing the Ratio of Total Debt to Total Assets
S is the size of the firms represented by the Log of Turnover
Lag_Pat represent change in PAT over time
Debt/Equity Mix connotes the Ratio of the Total Debt to the Shareholders Fund and
Tax represents the corporate tax of the firms to the PAT.
Where:
ROA = Return on Asset and is measured by earnings before interest and tax (EBIT) divided by total assets
ROE = Return on Equity, measured by earnings before interest and tax (EBIT) + Preference dividend), all divided by equity
S = Size of the firm measured by Log of Turnover
T = Tax measured as Total Corporate tax to earnings before interest and tax.

PER components and the different independent measures inter play can be re-written thus:
ROA it = f(Lev, Debt/Equity Mix, Lag_Pat,Size, Tax*)* ------------------------------ (2)
ROE it = f(Lev, Debt/Equity Mix, Lag_Pat,Size, Tax) ------------------------------ (3)

The following models are therefore relevant to the results of the tests of the stated hypotheses:

Hypothesis One
Estimation Equation:
=========================
ROA(1) = C(-1) + C(2)*D_E_MIX(-1) + C(3)*LAG_PAT_(-1) + C(4)*PAT(-1) + C(5)*LEV(-1) + C(6)*SIZE(-1) + C(7)*TAX(-1)

Hypothesis Two
Estimation Equation:
=========================
ROE(1) = C(1) + C(2)*D_E_MIX(1) + C(3)*LAG_PAT_(1) + C(4)*LEV(1) + C(5)*PAT(1) + C(6)*SIZE(1) + C(7)*TAX(1)

3. Methods of Estimation

Descriptive statistics and an econometric technique of Panel data method were used to analyze the gathered data. Regression model in form of the Fixed Effects Model, Random Effects Model and the Pooled Ordinarily Least Square (OLS) model was employed to establish the most appropriate regression with the highest explanatory power that is better suited to the data set that is a balanced panel (Greene, 2003; Chen, 2004; Salawu, 2007). The Pooled Ordinary Least Square (POLS) was used in the first instance. However, in view of the weaknesses associated with it, Fixed Effects Model (FEM) and Random Effect Model (REM) were used to capture the performance of the firms. The Hausman's Chi-square statistics tested whether the Fixed Effects model estimator is an appropriate alternative to the Random Effects model (Judge et al., 2007; Zeitun and Tian, 2007).

4. Data analysis and Findings

The descriptive statistics of the dependent variable and the explanatory variables which shows a brief but concise sum of the distribution is given by table 1. The Regression Analyses between the period 2005 to 2014 showing the relationship between the dependent and independent variables in order to test the earlier stated hypotheses were also presented.

Descriptive Statistics: The table below shows the descriptive statistics of the data for the period under review.

Table 1: Descriptive Statistics

	D_E_MIX	EPS	LAG_PAT_	LEV	PAT	ROA	ROE	SIZE	TAX
Mean	4.382943	1.967677	1465246.	0.551569	7716321.	0.090289	0.201615	7.486548	0.286705
Median	1.158886	1.640000	193000.0	0.529035	2789977.	0.055571	0.157641	7.670319	0.382828
Maximum	696.3355	458.4000	3.88E+08	1.766353	1.34E+08	1.809955	13.51818	8.828132	7.205523
Minimum	-71.40651	-551.1600	-3.08E+08	0.033246	-2.81E+08	-0.789423	-20.87697	0.000000	-16.25982
Std. Dev.	40.83340	50.26933	34811010	0.288135	26106387	0.187823	1.832205	0.816254	1.298223
Skewness	16.43190	-3.719903	1.706279	0.376936	-3.336785	2.389876	-4.483651	-3.081116	-6.918560
Kurtosis	279.5853	87.24057	77.88035	3.284762	56.99420	29.33214	77.52003	25.79644	95.53062
Jarque-Bera	960046.1	88503.82	69531.57	8.036472	36628.89	8863.315	69716.38	6900.928	108323.1
Probability	0.000000	0.000000	0.000000	0.017985	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	1301.734	584.4000	4.35E+08	163.8159	2.29E+09	26.81585	59.87971	2223.505	85.15131
Sum Sq. Dev.	493540.6	747993.5	3.59E+17	24.57437	2.02E+17	10.44208	993.6647	197.2163	498.8733
Observations	297	297	297	297	297	297	297	297	297

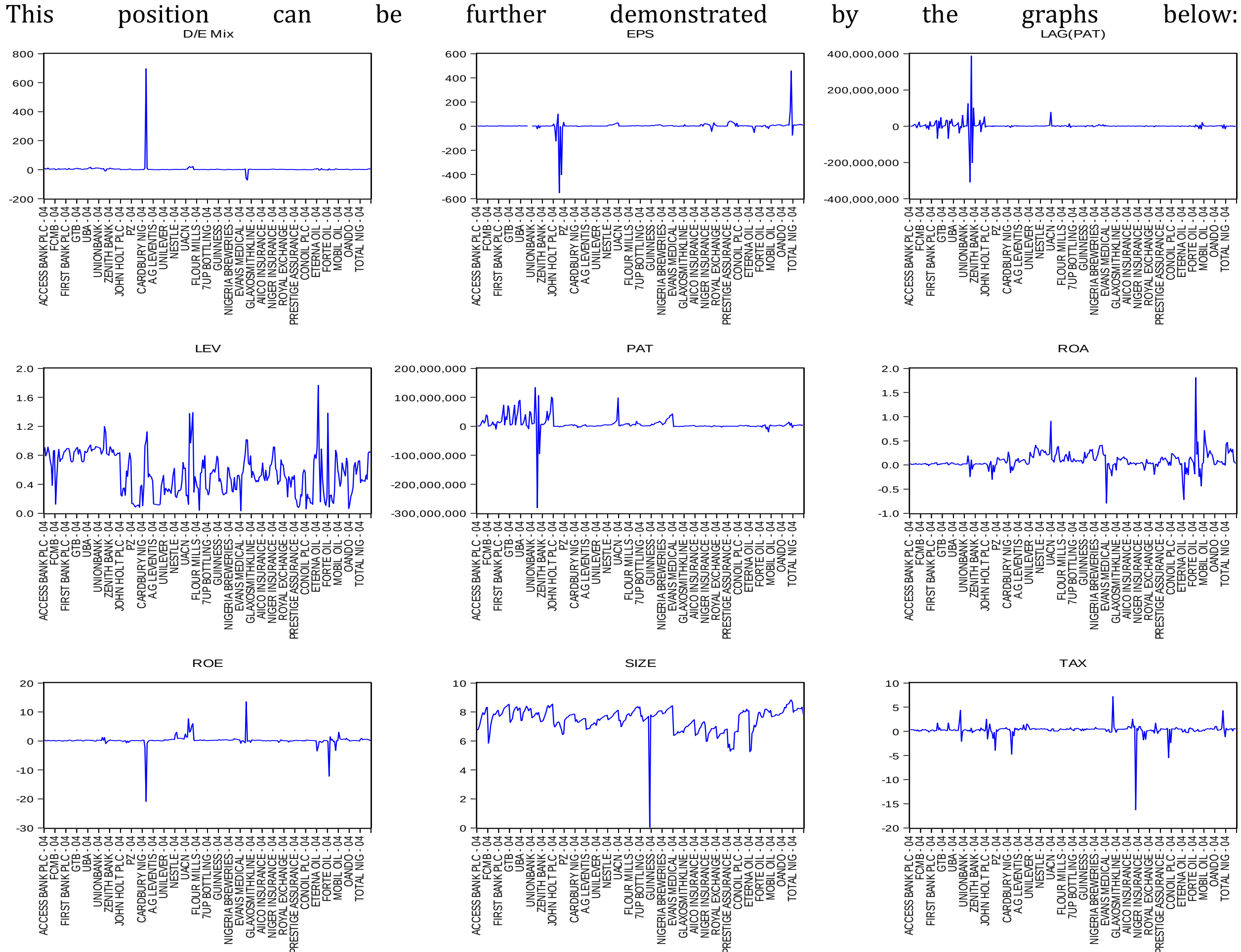
(Note: D_E_Mix = Total Debt/Total shareholders fund, LAG_PAT=Change in Turnover between Time ROA = PAT/Total Assets ROE= PAT/Shareholder Fund Size= Log Turnover Tax= Tax/PAT)
(Source: Author's Computation with the aid of E-View 9 Statistical Software Package)

From the table 1 above, ROA and ROE show that Nigerian companies are not doing enough to satisfy the wealth maximization objective of the shareholders. The result shows that the mean of ROA is just 9% meaning that the corporations are less efficient in the utilization of its asset base showing an un-solid financial and operational performance in the period under. This abysmal performance can also be attributed to the high tax rate of 30% being levied against corporations in the country. The ratio of debt to equity deviated however from this general principle evidenced by the excessively high figure recorded as 16.43190. The conclusion from this is that Nigerian firms perhaps maintain a high level of debt equity mix. The results of the skewness and kurtosis equally indicated that all the variables deviated from the one obtainable from a normal curve. Given the results therefore, all the variables are skewed more both to the right and left. Indicating more positive and negative observations because it is far above the 0.0 normal level of skewness for distributions showing to a large extent how the instability in the socio, economic and political situations in the country affects organizations in the country.

Test of Hypotheses: In order to confirm the veracity or otherwise of the stated hypotheses, Unit root test, cross sectional test, Hausman test and correlation analysis tests are conducted.

Test For Stationary (Unit Root Test): To test for stationary the Augmented Dickey-Fuller (ADF) Unit Root Test Approach was used to ensure that the various parameters are estimated using stationary time series data. Thus, the study seeks to avoid the occurrence of bogus and unrealistic outcome.

This position can be further demonstrated by the graphs below:



A graphical presentation of the dependent and the independent variables used for the study
(Source: E-View Generated Output by the Researcher, 2016)

Table 2: ADF Unit Root Test

VARIABLES	ADF	PVALUE	ORDER OF INTEGRATION
EPS	133.856	0.0000	I(1)
LAG_PAT	102.503	0.0005	I(1)
LEV	91.7346	0.0052	I(1)
PAT	99.2833	0.0011	I(1)
ROA	116.140	0.0000	I(1)
ROE	108.449	0.0001	I(1)
SIZE	106.270	0.0002	I(1)
TAX	125.256	0.0000	I(1)
D_E_MIX	115.398	0.0000	I(1)

(Source: Author's computation with the aid of E-Views 9, 2016)

Form table 2 above, it can be observed that the data does not suffer any stationary problem at first differential level at 1%, 5% and 10% level of significant. Therefore, the result of the regression model can be relied upon at these levels. The study concluded that all the variables under consideration did not have unit root and were therefore used in levels instead of their first difference. This means that the results obtained were not spurious (Gujarati, 2003).

Table 3: Model Specification

Dependent Variable: ROA
Method: Panel EGLS (Cross-section random effects)
Date: 02/26/16 Time: 10:23
Sample: 2005 2014
Periods included: 10
Cross-sections included: 30
Total panel (balanced) observations: 300
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.043255	0.110962	-0.389819	0.6970
D_E_MIX	2.01E-05	0.000237	0.084946	0.9324
LAG_PAT_	1.54E-10	3.95E-10	0.390312	0.6966
LEV	-0.153284	0.037366	-4.102253	0.0001
PAT	1.03E-09	5.76E-10	1.791208	0.0743
SIZE	0.027684	0.014449	1.915987	0.0563
TAX	0.006809	0.007276	0.935690	0.3502
	Effects Specification			
			S.D.	Rho
Cross-section random			0.074095	0.1880
Idiosyncratic random			0.153978	0.8120
	Weighted Statistics			
R-squared	0.104326	Mean dependent var		0.049155
Adjusted R-squared	0.085985	S.D. dependent var		0.162580
S.E. of regression	0.155433	Sum squared resid		7.078717
F-statistic	5.687990	Durbin-Watson stat		1.727435
Prob(F-statistic)	0.000013			
	Unweighted Statistics			
R-squared	0.151494	Mean dependent var		0.089505
Sum squared resid	8.875997	Durbin-Watson stat		1.377651

(Source: Author's Computation with the aid of E-View 9 Statistical Software Package)

Cointegration Test: The purpose of the cointegration test is to determine whether a group of non-stationary series is cointegrated or not. As explained below, the presence of a cointegrating relation forms the basis of the VEC specification. E-Views implements VAR-based cointegration tests using the methodology developed in (Johansen, 1995).

Table 4: Cointegration Test

Vector Error Correction Estimates
Date: 10/02/16 Time: 02:19
Sample (adjusted): 4 300
Included observations: 199 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	**CointEq1**			
LROA(-1)	1.000000			
LD_E_MIX(-1)	210.8648			
	(44.8560)			
	[4.70093]			
LSIZE(-1)	-1679.119			
	(533.143)			
	[-3.14947]			
LTAX(-1)	552.6438			
	(86.8376)			
	[6.36411]			
C	3941.367			
Error Correction:	D(LROA)	D(LD_E_MIX)	D(LSIZE)	D(LTAX)
CointEq1	0.000628	-0.000208	3.34E-05	-0.001082
	(0.00019)	(0.00019)	(1.1E-05)	(0.00020)
	[3.33521]	[-1.07631]	[3.17086]	[-5.48903]
D(LROA(-1))	-0.171168	-0.034684	0.000409	-0.035291
	(0.07791)	(0.08013)	(0.00436)	(0.08153)
	[-2.19704]	[-0.43287]	[0.09399]	[-0.43284]
D(LROA(-2))	-0.196980	-0.053935	0.005020	0.036314
	(0.08058)	(0.08287)	(0.00451)	(0.08432)
	[-2.44463]	[-0.65083]	[1.11436]	[0.43065]
D(LD_E_MIX(-1))	-0.077309	-0.160060	-0.002596	0.081357
	(0.07747)	(0.07968)	(0.00433)	(0.08108)
	[-0.99787]	[-2.00880]	[-0.59939]	[1.00344]
D(LD_E_MIX(-2))	-0.061557	-0.135062	-0.004443	0.053216
	(0.07339)	(0.07548)	(0.00410)	(0.07680)
	[-0.83876]	[-1.78940]	[-1.08274]	[0.69288]
D(LSIZE(-1))	-1.082608	0.089868	-0.067931	-2.844558
	(1.24684)	(1.28234)	(0.06971)	(1.30484)
	[-0.86828]	[0.07008]	[-0.97445]	[-2.18001]
D(LSIZE(-2))	-0.993946	-1.405566	-0.067012	1.498184
	(1.28776)	(1.32442)	(0.07200)	(1.34765)
	[-0.77184]	[-1.06127]	[-0.93072]	[1.11170]
D(LTAX(-1))	-0.236554	-0.007973	-0.016056	-0.094817

	(0.10121)	(0.10409)	(0.00566)	(0.10592)
	[-2.33727]	[-0.07659]	[-2.83744]	[-0.89520]
D(LTAX(-2))	-0.188292	0.126241	0.003013	0.017590
	(0.08263)	(0.08499)	(0.00462)	(0.08648)
	[-2.27863]	[1.48543]	[0.65208]	[0.20340]
C	-0.048195	0.006304	0.003454	0.025740
	(0.05558)	(0.05716)	(0.00311)	(0.05817)
	[-0.86712]	[0.11028]	[1.11161]	[0.44254]
R-squared	0.130103	0.094374	0.111986	0.336582
Adj. R-squared	0.088679	0.051249	0.069700	0.304991
Sum sq. resids	114.5642	121.1795	0.358134	125.4691
S.E. equation	0.778563	0.800726	0.043530	0.814775
F-statistic	3.140782	2.188387	2.648277	10.65426
Log likelihood	-227.4279	-233.0136	346.4864	-236.4748
Akaike AIC	2.386210	2.442348	-3.381772	2.477134
Schwarz SC	2.551703	2.607841	-3.216280	2.642627
Mean dependent	-0.059902	0.013583	0.003091	0.024082
S.D. dependent	0.815564	0.822068	0.045132	0.977332

Determinant resid covariance (dof adj.)	0.000315
Determinant resid covariance	0.000257
Log likelihood	-306.7729
Akaike information criterion	3.525356
Schwarz criterion	4.253524

(Source: Author's Computation with the aid of E-View 9 Statistical Software Package)

Estimation Proc:
===============================
EC(C,1) 1 2 LROA LD_E_MIX LSIZE LTAX

VAR Model:
===============================
D(LROA) = A(1,1)*(B(1,1)*LROA(-1) + B(1,2)*LD_E_MIX(-1) + B(1,3)*LSIZE(-1) + B(1,4)*LTAX(-1) + B(1,5)) + C(1,1)*D(LROA(-1)) + C(1,2)*D(LROA(-2)) + C(1,3)*D(LD_E_MIX(-1)) + C(1,4)*D(LD_E_MIX(-2)) + C(1,5)*D(LSIZE(-1)) + C(1,6)*D(LSIZE(-2)) + C(1,7)*D(LTAX(-1)) + C(1,8)*D(LTAX(-2)) + C(1,9)

D(LD_E_MIX) = A(2,1)*(B(1,1)*LROA(-1) + B(1,2)*LD_E_MIX(-1) + B(1,3)*LSIZE(-1) + B(1,4)*LTAX(-1) + B(1,5)) + C(2,1)*D(LROA(-1)) + C(2,2)*D(LROA(-2)) + C(2,3)*D(LD_E_MIX(-1)) + C(2,4)*D(LD_E_MIX(-2)) + C(2,5)*D(LSIZE(-1)) + C(2,6)*D(LSIZE(-2)) + C(2,7)*D(LTAX(-1)) + C(2,8)*D(LTAX(-2)) + C(2,9)

D(LSIZE) = A(3,1)*(B(1,1)*LROA(-1) + B(1,2)*LD_E_MIX(-1) + B(1,3)*LSIZE(-1) + B(1,4)*LTAX(-1) + B(1,5)) + C(3,1)*D(LROA(-1)) + C(3,2)*D(LROA(-2)) + C(3,3)*D(LD_E_MIX(-1)) + C(3,4)*D(LD_E_MIX(-2)) + C(3,5)*D(LSIZE(-1)) + C(3,6)*D(LSIZE(-2)) + C(3,7)*D(LTAX(-1)) + C(3,8)*D(LTAX(-2)) + C(3,9)

D(LTAX) = A(4,1)*(B(1,1)*LROA(-1) + B(1,2)*LD_E_MIX(-1) + B(1,3)*LSIZE(-1) + B(1,4)*LTAX(-1) + B(1,5)) + C(4,1)*D(LROA(-1)) + C(4,2)*D(LROA(-2)) + C(4,3)*D(LD_E_MIX(-1)) + C(4,4)*D(LD_E_MIX(-2)) + C(4,5)*D(LSIZE(-1)) + C(4,6)*D(LSIZE(-2)) + C(4,7)*D(LTAX(-1)) + C(4,8)*D(LTAX(-2)) + C(4,9)

VAR Model - Substituted Coefficients:
===============================
D(LROA) = 0.000628013538327*(LROA(-1) + 210.86481268*LD_E_MIX(-1) - 1679.11940652*LSIZE(-1) + 552.643838719*LTAX(-1) + 3941.36659573) - 0.171167978772*D(LROA(-1)) - 0.196979676359*D(LROA(-2)) -

0.0773087850168*D(LD_E_MIX(-1)) - 0.0615567088303*D(LD_E_MIX(-2)) - 1.08260807335*D(LSIZE(-1)) - 0.993945771353*D(LSIZE(-2)) - 0.236553624592*D(LTAX(-1)) - 0.188292442889*D(LTAX(-2)) - 0.048194563484

D(LD_E_MIX) = - 0.000208437141995*(LROA(-1) + 210.86481268*LD_E_MIX(-1) - 1679.11940652*LSIZE(-1) + 552.643838719*LTAX(-1) + 3941.36659573) - 0.034683797206*D(LROA(-1)) - 0.0539348102886*D(LROA(-2)) - 0.160060232021*D(LD_E_MIX(-1)) - 0.135061807735*D(LD_E_MIX(-2)) + 0.0898676215657*D(LSIZE(-1)) - 1.40556622776*D(LSIZE(-2)) - 0.00797257050475*D(LTAX(-1)) + 0.126241446521*D(LTAX(-2)) + 0.00630407410369

D(LSIZE) = 3.3382710472e-05*(LROA(-1) + 210.86481268*LD_E_MIX(-1) - 1679.11940652*LSIZE(-1) + 552.643838719*LTAX(-1) + 3941.36659573) + 0.000409430424652*D(LROA(-1)) + 0.00502032819494*D(LROA(-2)) - 0.00259634807929*D(LD_E_MIX(-1)) - 0.00444281055602*D(LD_E_MIX(-2)) - 0.0679313763568*D(LSIZE(-1)) - 0.0670120989649*D(LSIZE(-2)) - 0.0160563486456*D(LTAX(-1)) + 0.00301269768048*D(LTAX(-2)) + 0.00345435996113

D(LTAX) = - 0.00108164849559*(LROA(-1) + 210.86481268*LD_E_MIX(-1) - 1679.11940652*LSIZE(-1) + 552.643838719*LTAX(-1) + 3941.36659573) - 0.0352905517191*D(LROA(-1)) + 0.0363142631026*D(LROA(-2)) + 0.0813565109973*D(LD_E_MIX(-1)) + 0.0532156161253*D(LD_E_MIX(-2)) - 2.84455751061*D(LSIZE(-1)) + 1.49818366069*D(LSIZE(-2)) - 0.0948167019604*D(LTAX(-1)) + 0.0175898298285*D(LTAX(-2)) + 0.0257401237614

Table 5: Cointegration Test

Date: 10/02/16 Time: 02:34
Sample (adjusted): 5 300
Included observations: 177 after adjustments
Trend assumption: Linear deterministic trend
Series: COINTEQ01
Exogenous series: LROA LD_E_MIX LEPS LSIZE LTAX
Warning: Critical values assume no exogenous series
Lags interval (in first differences): 1 to 1
Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	**Eigenvalue**	**Trace Statistic**	**0.05 Critical Value**	**Prob.****
None *	0.214032	42.62848	3.841466	0.0000

Trace test indicates 1 cointegratingeqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.214032	42.62848	3.841466	0.0000

Max-eigenvalue test indicates 1 cointegratingeqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):

COINTEQ01
0.346297
Unrestricted Adjustment Coefficients (alpha):

D(COINTEQ01) -2.026673

Decision: The probability 0.0000 is less than the 5% critical level, meaning that the null hypothesis will be accepted i.e. there is co-integration. Therefore the assumption of the panel VAR model has been fulfilled. Hence it can be concluded that there is long run association between the dependent variable and independent variables.

Testing for random and fixed effects on Variables: The Hausman Test was conducted to determine which model bests suited this research work.

Table 6: Hausman Test

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	11.563277	6	0.0725

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
D_E_MIX	-0.000009	0.000020	0.000000	0.5058
LAG_PAT_	0.000000	0.000000	0.000000	0.3647
LEV	-0.122447	-0.153284	0.000344	0.0965
PAT	0.000000	0.000000	0.000000	0.3988
SIZE	0.009634	0.027684	0.000076	0.0384
TAX	0.006171	0.006809	0.000001	0.5757

Cross-section random effects test equation:
Dependent Variable: ROA
Method: Panel Least Squares
Date: 09/26/15 Time: 10:26
Sample: 2005 2014
Periods included: 10
Cross-sections included: 30
Total panel (balanced) observations: 300

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.073950	0.130060	0.568581	0.5701
D_E_MIX	-9.00E-06	0.000241	-0.037395	0.9702
LAG_PAT_	6.42E-11	4.08E-10	0.157572	0.8749
LEV	-0.122447	0.041719	-2.935035	0.0036
PAT	1.21E-09	6.12E-10	1.971021	0.0498
SIZE	0.009634	0.016876	0.570859	0.5686
TAX	0.006171	0.007365	0.837900	0.4028

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.401644	Mean dependent var	0.089505
Adjusted R-squared	0.322316	S.D. dependent var	0.187045
S.E. of regression	0.153978	Akaike info criterion	-0.791846
Sum squared resid	6.259247	Schwarz criterion	-0.347392
Log likelihood	154.7768	Hannan-Quinn criter.	-0.613974
F-statistic	5.063112	Durbin-Watson stat	1.928403
Prob(F-statistic)	0.000000		

Table 7: Fixed Effect Model (ROA as a Measure of Performance)

Dependent Variable: ROA
Method: Panel Least Squares
Date: 02/26/16 Time: 10:29
Sample: 2005- 2014
Periods included: 10
Cross-sections included: 30
Total panel (balanced) observations: 300

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.073950	0.130060	0.568581	0.5701
D_E_MIX	-9.00E-06	0.000241	-0.037395	0.9702
LAG_PAT_	6.42E-11	4.08E-10	0.157572	0.8749
LEV	-0.122447	0.041719	-2.935035	0.0036
PAT	1.21E-09	6.12E-10	1.971021	0.0498
SIZE	0.009634	0.016876	0.570859	0.5686
TAX	0.006171	0.007365	0.837900	0.4028

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.401644	Mean dependent var	0.089505
Adjusted R-squared	0.322316	S.D. dependent var	0.187045
S.E. of regression	0.153978	Akaike info criterion	-0.791846
Sum squared resid	6.259247	Schwarz criterion	-0.347392
Log likelihood	154.7768	Hannan-Quinn criter.	-0.613974
F-statistic	5.063112	Durbin-Watson stat	1.928403
Prob(F-statistic)	0.000000		

(Source: Author's Computation with the aid of E-View 9 Statistical Software Package)

Estimation Equation:

=========================

ROA = C(1) + C(2)*D_E_MIX + C(3)*LAG_PAT_ + C(4)*LEV + C(5)*PAT + C(6)*SIZE + C(7)*TAX + [CX=F]

Substituted Coefficients:

=========================

ROA = 0.0739495601434 - 8.99512089698e-06*D_E_MIX + 6.42411025566e-11*LAG_PAT_ - 0.122447231257*LEV + 1.2060113731e-09*PAT + 0.00963393786441*SIZE + 0.0061711847609*TAX + [CX=F]

Table 8: Random Effect Model (ROE as Measure of Performance)
Dependent Variable: ROE
Method: Panel Least Squares
Date: 02/26/16 Time: 09:51
Sample: 2005 2014
Periods included: 10
Cross-sections included: 30
Total panel (balanced) observations: 300

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.231721	0.751073	-0.308520	0.7579
D_E_MIX	-0.031396	0.001968	-15.94941	0.0000
LAG_PAT_	-2.75E-09	3.25E-09	-0.847844	0.3972
LEV	0.499759	0.270315	1.848802	0.0655
PAT	4.16E-09	4.46E-09	0.931895	0.3522
SIZE	0.036448	0.099638	0.365808	0.7148
TAX	-0.024265	0.061428	-0.395024	0.6931

R-squared	0.479956	Mean dependent var	0.200993
Adjusted R-squared	0.469307	S.D. dependent var	1.823057
S.E. of regression	1.328073	Akaike info criterion	3.428391
Sum squared resid	516.7867	Schwarz criterion	3.514813
Log likelihood	-507.2587	Hannan-Quinn criter.	3.462978
F-statistic	45.06906	Durbin-Watson stat	1.781037
Prob(F-statistic)	0.000000		

In order to choose between fixed and random effects model for model 1 ROA, Hausman test was used. The null hypothesis of the Hausman test was that the Random Effects Model was preferred to the Fixed Effects Model. For ROA model, Hausman test reported a chi-square of 11.563277 with a p-value of 0.0725 implying that at 5 percent level, the chi-square value obtained was statistically significant. Therefore, researcher failed to accept the null hypothesis which states that random effects model was preferred to fixed effect model for ROA.

Table 9: Hausman Test
Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.307318	6	0.8894

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
D_E_MIX	-0.031381	-0.031387	0.000000	0.9857
LAG_PAT_	-0.000000	-0.000000	0.000000	0.8918
LEV	0.569513	0.543816	0.019245	0.8530
PAT	0.000000	0.000000	0.000000	0.8582
SIZE	0.040402	0.040505	0.004280	0.9987
TAX	-0.054187	-0.045691	0.000072	0.3158

Cross-section random effects test equation:
Dependent Variable: ROE
Method: Panel Least Squares
Date: 02/26/16 Time: 10:35
Sample: 2005- 2014
Periods included: 10
Cross-sections included: 30
Total panel (balanced) observations: 300

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.285370	1.015609	-0.280984	0.7789
D_E_MIX	-0.031381	0.001878	-16.70682	0.0000
LAG_PAT_	-2.45E-09	3.18E-09	-0.769113	0.4425
LEV	0.569513	0.325776	1.748174	0.0816
PAT	3.28E-09	4.78E-09	0.687350	0.4925
SIZE	0.040402	0.131783	0.306578	0.7594
TAX	-0.054187	0.057512	-0.942189	0.3470

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.615924	Mean dependent var	0.200993
Adjusted R-squared	0.565005	S.D. dependent var	1.823057
S.E. of regression	1.202381	Akaike info criterion	3.318652
Sum squared resid	381.6703	Schwarz criterion	3.763106
Log likelihood	-461.7978	Hannan-Quinn criter.	3.496523
F-statistic	12.09613	Durbin-Watson stat	2.389747
Prob(F-statistic)	0.000000		

(Source: Author's Computation with the aid of E-View 9 Statistical Software Package)

Table 10: Fixed Effect Model (ROE as a Measure of Profitability)
Dependent Variable: ROE
Method: Panel Least Squares
Date: 02/26/16 Time: 10:39
Sample: 2005- 2014
Periods included: 10
Cross-sections included: 30
Total panel (balanced) observations: 300

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	-0.285370	1.015609	-0.280984	0.7789
D_E_MIX	-0.031381	0.001878	-16.70682	0.0000
LAG_PAT_	-2.45E-09	3.18E-09	-0.769113	0.4425
LEV	0.569513	0.325776	1.748174	0.0816
PAT	3.28E-09	4.78E-09	0.687350	0.4925
SIZE	0.040402	0.131783	0.306578	0.7594
TAX	-0.054187	0.057512	-0.942189	0.3470

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.615924	Mean dependent var	0.200993
Adjusted R-squared	0.565005	S.D. dependent var	1.823057
S.E. of regression	1.202381	Akaike info criterion	3.318652
Sum squared resid	381.6703	Schwarz criterion	3.763106
Log likelihood	-461.7978	Hannan-Quinn criter.	3.496523
F-statistic	12.09613	Durbin-Watson stat	2.389747
Prob(F-statistic)	0.000000		

Estimation Equation:
=========================
ROE = C(1) + C(2)*D_E_MIX + C(3)*LAG_PAT_ + C(4)*LEV + C(5)*PAT + C(6)*SIZE + C(7)*TAX + [CX=F]

Substituted Coefficients:
=========================
ROE = -0.285369701672 - 0.0313812465684*D_E_MIX - 2.44854340447e-09*LAG_PAT_ + 0.569512672136*LEV + 3.28413805967e-09*PAT + 0.0404016968541*SIZE - 0.054187291596*TAX + [CX=F]

The Hausman test was used to choose between fixed and random effects for model 2. The null hypothesis of the Hausman test was that the Random Effects Model was preferred to the Fixed Effects Model. For ROE model, Hausman test reported a chi-square of 2.307318 with a p-value of 0.8894 implying that at 5 percent level, the chi-square value obtained was statistically significant. The researcher therefore failed to accept the null hypothesis that random effects model was preferred to fixed effect model for ROE.

Test of hypothesis: In order to establish the veracity or otherwise of the stated hypotheses, Regression analysis and Co-efficient of Correlation tests were conducted between the dependent and the independent variables.

Hypothesis One
H_o: Financial Leverage does not significantly affect the profitability of Nigerian-listed companies.

Estimation Equation:
=========================
ROA(-1) = C(1) + C(2)*D_E_MIX(-1) + C(3)*LAG_PAT_(-1) + C(4)*PAT(-1) + C(5)*LEV(-1) + C(6)*SIZE(-1) + C(7)*TAX(-1)

Substituted Coefficients:
=========================
ROA(-1) = -0.199845637401 - 4.49017656522e-06*D_E_MIX(-1) + 2.43125939918e-10*LAG_PAT_(-1) + 5.90567228179e-10*PAT(-1) - 0.197988086624*LEV(-1) + 0.0530055949528*SIZE(-1) - 3.21944614023e-10*TAX(-1)

Table 11: Regression Analysis
Dependent Variable: ROA(-1)
Method: Panel Least Squares
Date: 02/13/16 Time: 09:48
Sample (adjusted): 2005 2014
Periods included: 9
Cross-sections included: 30
Total panel (balanced) observations: 270

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.199846	0.106719	-1.872627	0.0622
D_E_MIX(-1)	-4.49E-06	0.000252	-0.017826	0.9858
LAG_PAT_(-1)	2.43E-10	4.83E-10	0.502850	0.6155
PAT(-1)	5.91E-10	6.74E-10	0.876701	0.3814
LEV(-1)	-0.197988	0.037421	-5.290879	0.0000
SIZE(-1)	0.053006	0.014274	3.713515	0.0002
TAX(-1)	-3.22E-10	2.21E-09	-0.145734	0.8842

R-squared	0.159492	Mean dependent var	0.090970
Adjusted R-squared	0.140317	S.D. dependent var	0.189303
S.E. of regression	0.175520	Akaike info criterion	-0.616542
Sum squared resid	8.102329	Schwarz criterion	-0.523249
Log likelihood	90.23311	Hannan-Quinn criter.	-0.579079
F-statistic	8.317691	Durbin-Watson stat	1.500984
Prob(F-statistic)	0.000000		

(Source: Author's Computation with the aid of E-View 9 Statistical Software Package)

Table 11 above presents the summary of regression results of model 1. In this table, ROA (which is measured by Profits after Tax (PAT) divided by Total Assets of the firm) was regressed against six independent variables: Debt/Equity Mix, Lag_Pat, PAT, Lev, Size and Tax. A coefficient of determination (R^2) of 14 percent was produced meaning that14 per cent proportion variability occurring in ROA can be explained by the its relationship with the independent variables while the remaining 86 percent is explained by other variables outside the model showing that the model has a good fit. The F-statistics (8.31) is statistically significant at 5% level of significant. Durbin- Watson (DW) of 1.5 shows that the model specified is free from the problem of serial auto-correlation. The autocorrelation among regression model residuals have been tested using Durbin-Watson factors, if Durbin Watson factors are between 1 and 3,there is no autocorrelation problem (Alsaeed, 2005). As shown in table (11), all Durbin-Watson factors are less than 3, so there is no autocorrelation problem in the regression models.

Table 12: Correlation Coefficient

	ROA	DEBT/EQY MIX	LAG_PAT_	LEV	PAT	SIZE	TAX
ROA	1						
DEBT/EQY MIX	-0.0378	1					
LAG_PAT_	0.1322	0.0007	1				
LEV	-0.2834	0.1221	0.0252	1			
+PAT	0.1676	0.0002	0.7175	0.1047	1		
SIZE	0.2258	0.0039	0.0361	0.0601	0.2461	1	
TAX	0.0819	-0.2581	-0.0024	-0.0675	0.0211	0.0694	1

(Source: Author's Computation with the aid of E-View 9 Statistical Software Package)

As presented in table 11, the correlation coefficients for all variables were less than 0.8 implying that the study data did not exhibit severe multicollinearity as recommended by (Gujarati, 2003;(Cooper & Schindler, 2008). The regression results presented in table 12 indicate that the coefficient of capital structure (represented by Debt/Equity ratio) of -0.0378 was insignificant statistically at 1 percent level with p-value of 0.9501. A negative interplay though insignificant was found between financial leverage and performance of listed firms. These findings were contrary with the capital structure irrelevance theory of Modigliani& Miller (1963) which argued that the debt amount in the capital structure does not impact firm's performance and value. Abdul (2012) however found a negatively significant interplay between financial leverage and firm performance as measured by Return on Assets (ROA). The findings of this research is in contrast with the findings ofSaeedi and Mahmoodi (2011), who claimed a positive a positive association exists between financial leverage and performance as measured by Return on Assets. The same can be said on the relationship between the Total Liabilities/ Total Assets (represented by Lev) of Nigerian listed firms and the financial performance as represented by Return on Assets. From the table, the co efficient is -0.2843is consistent with Afza and Nazir (2007)and Mwangi, Muathe, and Kosimbei (2014)who found a negative association between the aggressiveness of financing policy and accounting profit. Also, a negatively significant association was established between capital structure as measured by LTDTA, STDTA, and TDTE and firm's profitability (PROF), while an insignificantly negative interplay was found between TDTA and firm's profitability measure (PROF).

Hypothesis Two

H_o: There is no significant correlation between Financial Leverage mix and the financial performance of Nigerian-listed companies.

Estimation Equation:
=========================
ROE(-1) = C(1) + C(2)*D_E_MIX(-1) + C(3)*LAG_PAT_(-1) + C(4)*PAT(-1) + C(5)*LEV(-1) + C(6)*SIZE(-1) + C(7)*TAX(-1)

Substituted Coefficients:
=========================
ROE(-1) = -0.58908624776 - 0.0312935663637*D_E_MIX(-1) - 1.78122996494e-09*LAG_PAT_(-1) + 4.0910623105e-09*PAT(-1) + 0.635565927636*LEV(-1) + 0.0839240048998*SIZE(-1) - 2.34437680666e-08*TAX(-1)

Table 13: Regression Analysis

Dependent Variable: ROE(-1)
Method: Panel Least Squares
Date: 02/13/16 Time: 09:54
Sample (adjusted): 2005 2014
Periods included: 9
Cross-sections included: 30
Total panel (balanced) observations: 270

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.589086	0.844603	-0.697472	0.4861
D_E_MIX(-1)	-0.031294	0.001993	-15.69801	0.0000
LAG_PAT_(-1)	-1.78E-09	3.83E-09	-0.465498	0.6420
PAT(-1)	4.09E-09	5.33E-09	0.767378	0.4435
LEV(-1)	0.635566	0.296156	2.146052	0.0328
SIZE(-1)	0.083924	0.112965	0.742917	0.4582
TAX(-1)	-2.34E-08	1.75E-08	-1.340904	0.1811

R-squared	0.486290	Mean dependent var	0.199530
Adjusted R-squared	0.474570	S.D. dependent var	1.916368
S.E. of regression	1.389108	Akaike info criterion	3.520785
Sum squared resid	507.4906	Schwarz criterion	3.614077
Log likelihood	-468.3060	Hannan-Quinn criter.	3.558247
F-statistic	41.49366	Durbin-Watson stat	1.823242
Prob(F-statistic)	0.000000		

(Source: Author's Computation with the aid of E-View 9 Statistical Software Package)

Table 13 above presents the regression summary of model 1. In this table, Return on Equity (which is measured by Profit after Tax (PAT) divided by Shareholder's Fund of the firm) was regressed against six independent variables: Debt/Equity Mix, Lag_Pat, PAT, Lev, Size and Tax. A coefficient of determination (R^2) of 48 percent was gotten. 48 per cent of the variation occurring in roe can be explained by its relationship with the independent variables while the remaining 52 per cent is accounted for by other variables outside the model which shows that there exists goodness of fit. The F-statistics (41.49) is statistically significant at 5% level of significant which shows that the model is well specified. Non-auto correlation is absent with Durbin- Watson (DW) of 1.8. The autocorrelation among regression model residuals have been tested using Durbin-Watson factors, if Durbin Watson factors are between 1 and 3,there is no autocorrelation problem (Alsaeed, 2005).As shown in table (3), the Durbin-Watson factors are less than 3, so there is no autocorrelation problem in the regression models.

Table 14: Correlation Co-efficient

	ROE	DEBT/EQY MIX	LAG_PAT_	LEV	PAT	SIZE	TAX
ROE	1						
DEBT/EQY MIX	-0.6856	1					
LAG_PAT_	-0.0075	0.0007	1				
LEV	0.0008	0.1221	0.0252	1			
PAT	0.0339	0.0002	0.7175	0.1047	1		
SIZE	0.0299	0.0039	0.0361	0.0601	0.2461	1	
TAX	0.1605	-0.2581	-0.0024	-0.0675	0.0211	0.0694	1

(Source: Author's Computation with the aid of E-View 9 Statistical Software Package)

As presented in table 4.14, the correlation coefficients for all variables were less than 0.8 implying that the study data did not exhibit severe multicollinearity as recommended by (Gujarati, 2003; Cooper & Schindler, 2008). The regression result in table 1V indicate that the coefficient for Debt/Equity mix - 0.6856 and at 1% it is significant statistically , with p-value of 0.0000 .A negatively significant association exist between debt/equity and performance in the Nigerian quoted companies as measured by Return on Equity. These results supports the negative interplay between financial leverage and ROE findings of (Kaumbuthu, 2011)but contradicts the positively significant association of Akhtar, Javed, Maryam, and Sadia (2012) and the Agency Theory of Jensen & Meckling (1976).

5. Conclusion and Recommendations

This study focused on capital structure and Nigerian listed firm's performance with the aims of ascertaining the relationship between their performances by looking at some components of capital structure in their finances. Leverage was found to impact negatively on profitability at 1% significant level from the first objective. This is contrary to the *aprori* expectation for a direct association between profit and debt ratio as supported by agency cost theory preference for increased in financing when agency problem becomes pronounced. This also is a behavioral justification for the traditional approach that claimed that debt and equity should be mix appropriately in order to enhance firm's performance. It is therefore recommended that firms should ensure that finance mix should keep debt ratio lower even when facing agency problems. Secondly, the study set out to ascertain the relationship between Equity/Debt mix financing and performance of Nigerian listed firms. Just like the debt ratio, the result in the second objective showed an insignificantly indirect association between leverage and firm's performance. That is, equity/debt finances influences performance negatively. This is in conformity with our *apriori* expectation because from agency cost theory angle, firm's performance will be worsen by debt financing. From this result, it can be deduced that profitability will be enhanced in the Nigerian listed firms with equity financing hence the rejection of the null hypothesis 2 for predicting there is no relationship between Financial Leverage mix and the financial performance of Nigerian companies. Nigerian government should provide financial succor through the Central bank of Nigeria Policy by encouraging financial institutions to grant affordable debt finance to boost corporate growth. Firms should use long-term liabilities to finance firms' activities because current liabilities will negatively affect firms' performance. Equally, managers should gauge the cost of debt vis-à-vis profitability and taxation to select the best mix. D**e**bt and equity should be mixed appropriately and ensure that debt financing ratio is lower to enhance corporate financial performance.

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