Determinants of Capital Structure Decisions of Nigerian Listed Manufacturing Firms

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ABSTRACT

Capital structure decisions have been the most significant decisions to be taken by any business organization for maximization of shareholders wealth and sustained growth. The study has investigated the determinants of capital structure of Nigerian listed manufacturing companies for a period of five years from 2010 to 2015. Secondary data was collected from the annual reports of listed Nigerian manufacturing companies and it was analyzed using pooled least square. This study has investigated the impact of capital structure on profitability. It has examined the impact of firm's turnover, total assets, profit after tax, tax and interest on the leverage on the sampled firms. The results revealed that turnover, total assets, profit after tax, tax, and interest are strong determinants of capital structure of the Nigerian manufacturing firms. Therefore, it is recommended that in carrying out their debt equity mix, the financial managers of Nigerian listed firms should ensure proper monitoring of the following variables: turnover, total assets, and profit before tax, tax and interest of the firms in order to have an optimum financing mix for their firms.

Keywords: *Capital structure, Debt, Equity, Tax, Interest, Turnover, Profitability.*

Introduction

Capital structure is the mix of various sources of funds that a firm uses to finance its operation. It is the combination of debt and equity that attains certain managerial goals, that is, the maximization of the firm's market value. It could also be seen to be the combination of debt and equity that minimizes the firm's overall cost of capital.

"How do firms choose their capital structures?" Again, the answer is, "We don't know." This was the question and answer posed by Myers (1984). The various theories of capital structure attempt to provide justification for how a firm determines its capital structure. The basic theory in capital structure is the theory proposed by Modigliani & Miller (1958). In this theory they

demonstrated that in a frictionless world, financial leverage is unrelated to firm value (capital structure irrelevance), but in a world with tax-deductible interest payments, firm value and capital structure are positively related (capital structure relevance). Modigliani & Miller (1968) made two propositions under a perfect capital market condition. Their first proposition is that the value of a firm is independent of its capital structure. Their second proposition states that the cost of equity for a levered firm is equal to the cost of equity for an unlevered firm plus an added premium for financial risk.

However, other theories such as the trade – off theory (Myers,1984), pecking order theory (Myers & Majluf,1984) and agency cost theory (Jensen & Meckling, 1976) posited imperfection which exist in the real world can be adduce to the relevance of capital structure decision. Such imperfections are bankruptcy costs(Baxter, 1967, Kraus & Litzenberger& Ramaswamy 1982; and Kim, 1998), agency cost (Jensen & Meckling, 1976), gains from leverage-induced tax shields (De Angelo & Masulis, 1980) and information asymmetry (Myers, 1984). Capital structure decision is seen from the perspective of the firm's value i.e. the market value of a firm. Firms seek to maximize their share value by ensuring an optimal capital structure. Considering the relevance- irrelevance argument of capital structure decision in determining the value of the firm by different authors, this paper examined the determinants of capital structure in firms listed in the Nigeria stock exchange.

Many developing countries have experienced firm problems requiring major reforms to address weak supervision and inadequate capital. The effect of capital structure decisions on company profitability has been the focus of considerable amount of empirical research for many years. One of the main objectives of any firm is to maximize the profit, but, maintaining the liquidity of the firm also is an important objective. The problem is that the trade-off between liquidity and profitability can result in serious problems to firm. Thus, the strategy adopted by firms must be a balance between these two objectives of the firm. Because profitability and liquidity are equally important, one objective should not be at the cost of the other. If a firm ignores profit, the firm cannot survive for a long period also if a firm does not care about liquidity, it may face the problem of insolvency and bankruptcy. However the factors that determine the capital structure of the manufacturing firms listed on the Nigerian stock exchange have not been clearly established. In the light of this, this paper seeks to investigate the determinants of capital structure of listed manufacturing firms in Nigeria.

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Objectives of the Study

The general objective of the study is to examine the determinants of capital structure of Nigerian listed manufacturing firms. The specific objectives are as follows:

i. To determine the effect of liquidity and turnover on the capital structure decisions of listed manufacturing firms in Nigeria.
ii. To examine whether taxes and interest charges significantly impact on capital structure decisions of listed manufacturing firms in Nigeria.

Research Questions

The following questions were specifically designed to facilitate the effective pursuit of the study.

i. To what extent does liquidity and turnover affect the capital structure decisions of listed manufacturing firms in Nigeria?
ii. To what extent do taxes and interest charges significantly impact on capital structure decisions of listed manufacturing firms in Nigeria?

Statement of Hypotheses

The following hypotheses stated in the null form were tested in the study:

Ho_1: Liquidity and turnover do not significantly affect the capital structure decisions of listed manufacturing firms in Nigeria.

Ho_2: Taxes and interest charges do not significantly impact on capital structure decisions of listed manufacturing firms in Nigeria.

Scope of the Study

This study examined the determinants of capital structure among listed manufacturing firms in Nigerian. It focused on fifteen (15) listed companies within the manufacturing industry covering a period of five (5) years from 2010-2015.

Organization of the Paper

This study is organized into five sections, Section one which is the introduction, covers the objectives of the study, research questions, hypotheses and scope of the study. Section two which is the literature review is centered on the conceptual framework, theoretical framework and the review of previous studies on the subject matter. Section three is the research methodology which covered the operationalization of the research. Section four presents and analyses the data. Section five presents the summary of the findings, conclusions and recommendations.

Literature Review
This section covers review of extant literature, conceptual framework on the determinants of capital structure and the theoretical framework which includes theories that are related to capital structure.

Conceptual Framework
In order to facilitate better understanding of the study, basic concepts are first examined.

The Determinants of Capital Structure
Among the list of varied factors that determine capital structures are: personal tax, corporate tax, government and other regulations, floatation and other direct cost, macro economic variables, ownership structure, signalling, corporate governance, agency costs, and bankruptcy.

The Use of Debt
Leland&Toft (1996) states that, the value of a firm is the value of its assets plus the value of tax benefits enjoyed as a result of debt minus the value of bankruptcy cost associated with debt. The cost of using debt in addition to the requirement to pay interest may carry restrictive covenants that the borrower must satisfy to prevent default. Also a major cost of issuing debt is the possibility of financial distress (Jane, Malonis& Cengage, 2000). In considering the level of debt right for a firm, the firm will have to consider such factors as taxes, risk, financial slack/asset type and the cost of financial distress. Debt is tax deductible; increase in debt reduces income tax paid increases. Since debt payments are excluded from income in computing corporate income tax, the value of the firm should increase with the substitution of debt for equity financing (Ross, 1977). The tax-paying firms would be expected to substitute debt for equity, at least up to the point where the probability of financial distress starts to be important. In Miller's theory, the personal income taxes on interest payments would exactly offset the corporate interest tax shield, provided that the firm pays the full statutory tax rate, hence the irrelevance of the capital structure of a firm. A particular capital structure is considered better when it results in a lower weighted average cost of capital. A particular debt equity ratio represent the optimal capital structure if it results in the lowest possible weighted average cost of capital (WACC). The optimal capital structure is sometimes called the firm's target capital structure.

Taxes and Debt
The higher taxes are, the greater the tax advantage of debt. Hence, firms with higher tax rates should have higher debt ratios compared to firms with

lower tax rates. Inversely, firms that have substantial non-debt tax shields, such as depreciation, should be less likely to use debt than firms that do not have these tax shields. If tax rates increase over time, we would expect debt ratios to go up over time. Debt ratios in countries where debt has a much larger tax benefit should be higher than debt ratios in countries whose debt has a lower tax benefit. The evidence is mixed; Graham (1996) finds some support for tax factor. Titman and Wessels (1988) found that non-debt tax shields and the use of debt are positively correlated. A survey of392 Chief Financial Officers (CFO) by Graham and Harvey (2001) found that 45% surveyed agreed that tax considerations played an important role in their capital structure choices.

Equity and Firm Value
Equity unlike long-term debt includes paid-up share capital, share-premium, reserves and surplus or retained earnings. Igben (2004) defines paid-up capital as the portion of the called-up capital which has been paid-up by the shareholders, while reserves are amounts set aside out of profits earned by the company, which are not designed to meet any liability, contingency, commitment or diminution in value of assets known to exist at the balance sheet date. Reserves may be voluntarily created by directors or statutorily required by law. Share premium is the excess amount derived from the issue of shares at a price that is above its par value. And lastly, retained earnings are profit ploughed back into a company in order to create more resources for operations and invariably increase in the value of the firm (Maxwell &Kehinde, 2012).

Theoretical Framework
The theories of capital structure attempt to provide explanations to a firm's financial framework which consist of debt and equity used to finance the firm. These theories are: the Net Income Approach; the traditional approach; the Modigliani and Miller theory; Agency cost theory; static trade-off theory; pecking order theory; and Signalling theory.

The Net Operating Income Approach
The net operating income approach states that the total valuation of the firm is unaffected by its capital structure. Modigliani and Miller (1958) offered behavioural support for the independence of the total valuation and the cost of capital of the firm from its capital structure. The net operating income theory argues that the market value of a firm depends on its net operating income and business risk. The change in the degree of Leverage employed by a firm cannot change these underlying factors. It merely changes the

distribution of income and risk between debt and equity without affecting the total income and risk which influence the market value of the firm.

Modigliani and Miller Hypothesis of Capital Structure

They suggested that firms fall into some financing patterns or habits which have no material effect on firm value. They do not agree with the traditional view that posited that the firm has an optimal capital structure that occurs when WACC is minimum. Their first proposition was that the value of any firm is independent of its capital structure and also that the average cost of capital is the same for all firms in a particular risk class and is independent of the capital structure. They set forth a proof by arbitrage, supposing initially that the value of the leveraged firm exceeds the value of an otherwise identical unleveraged firm. Since an investor holding fraction of shares of the leveraged firm is entitled to receive expected return on the equity of the levered firm. This investor could sell his shares in the levered firm, borrow and use the total proceeds to purchase an identical fraction of shares in firm unlevered firm. His payoff from his holdings in unlevered firm, less his payment to satisfy his personal debt obligation should be equal to the capitalization of his equity. Modigliani and Miller pointed out that, under the traditional analysis, firms seeking to minimize cost of capital will borrow until the firm's cost of capital equals the market rate of interest. In their second proposition, they maintained that the cost of equity capital of the levered firm is linearly related to its debt. That is the leverage firm's cost of equity includes a risk premium that is directly related to its financial leverage. In their third proposition, they maintained that the firm's investment hurdle rate (discount rate or minimum acceptable rate of return) is its average cost of capital regardless of the investment's method of financing an investment. Equivalently, they state "regardless of the financing used, the marginal cost of capital to a firm is equal to the average cost of capital, which is in turn equal to the capitalization rate for an unlevered stream in the class to which the firm belongs (Modigliani & Miller, 1958).

Pecking Order Theory

This posits that the capital structure of the firm is driven by the firms' desire to finance new investments, first internally, then with low-risk debt, and finally equity only as a last resort. This theory is based on the assertion that managers have more information about their firms than investors. This disparity of information is referred to as asymmetric information. Because of this information disparity, managers will use debt when they are positive about their firms' future prospects and will issue equity when they are unsure. Pandey (2005) maintained that a commitment to pay fixed amount of interest and principal to debt holders implies that the company expects

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steady cash flows. On the other hand an equity issue would indicate that the current share price is overvalued. Therefore the manner in which managers raises capital, gives a signal of their belief in their firm's prospect to investors. In essence, this theory explains the negative relationship between profitability and debt ratio within an industry.

Trade-off Theory

The term trade-off theory is used by different authors to describe a family of related theories. Management running a firm evaluates the various costs and benefits of alternative leverage plans and strives to bring a trade-off between them. It is an attempt at balancing marginal costs and marginal benefits.

Static Trade-off Framework

The firm is viewed as setting a target debt to value ratio and gradually moving towards it (Myers 1984). The theory says that every firm has an optimal debt-equity ratio that maximizes its value. The theory affirms that firms have optimal capital structure, which they determine by trading off the costs against the benefits of the use of debt and equity. The benefits from debt tax shield are thus adjusted against cost of financial distress. Agency cost, informational asymmetry and transaction cost are some of the other costs to be mitigated. The theory predicts that an optimal target financial debt ratio exists, which maximizes the value of the firm. The optimal point can be attained when the marginal value of the benefits associated with debt issues exactly offsets the increase in the present value of the costs associated with issuing more debt (Myers 2001). The **dynamic trade-off theory** uses time in identifying optimal capital structure. For example, considering tax savings versus bankruptcy cost trade-off will make judicious use of time factor – short-run and long-run effect.

Free Cash Flow Theory

This theory is also framed for matured firms that are prone to over invest. It says that high debt levels will increase value, despite the threat of financial distress, when a firm's operating cash flow significantly exceeds its profitable investment opportunities (Myers, 2001). Thus, the profit earning capacity increases the value of the firm despite the threat of financial distress. Firms with a positive free cash flow use this cash flow to lower their debt ratio. Firms with a negative free cash flow increase their debt ratio to respond to the lack of internal funds. The percentage adjustment is smaller for firms with relatively more debt than for firms with relatively low debt.

Empirical Review

Antwi, Atta-Mills & Zhao (2012) found that in an emerging economy like Ghana, equity capital as a component of capital structure is relevant to the value of a firm, and long-term-debt was also found to be a major determinant of a firm's value. Ross (1977) developed the incentive-signalling model relating activity choice and incentive schedule in a perfect market and applying it to instances where manager face production problem as well as a financial decision and choose an optimal activity from a given production set according to an endogenously determined investment criterion. Myers contrasts two ways of thinking about capital structure as: static trade-off framework, in which the firm is viewed as setting a target debt-to-value ratio and gradually moving towards a target payout ratio; and an old fashion pecking order framework, in which the firm prefers internal to external financing, and debt to equity if it issues securities. Several researchers have tested the effects of profitability on firm leverage.

Kester (1986) concluded that there is a significantly negative relation between profitability and debt/asset ratios. Rajan&Zingales (1995) found a significantly negative relation between profitability and debt/asset ratios for the USA, the UK and Japan. In a study conducted by Abor (2008), found out that there is no significant relationship between capital structure of publicly quoted firms and large unquoted firms in Ghana, the results revealed that short-term debt constitutes a relatively high proportion of total debt of all the sample groups examined and it also indicated that age of the firm, size of the firm, asset structure, profitability, risk and managerial ownership are important in influencing the capital structure decisions of Ghanaian firms. Maxwell &Kehinde (2012) undertook a study in Nigeria and found out that long-term debt impact positively on firm's value, while equity capital does not impact positively. In a Study by Abdul, Geetha, Mohidin, Abdul, Sang, &Ch'ng (2013), they found out that profitability, tangibility and liquidity had significant negative relationship with leverage while firm size is positively related with leverage in large capitalized firms in Malaysia.

Research Methodology

This section discusses the method and procedures that were employed in carrying out the research. They include research design, study population, sample size, sampling technique, types and sources of data, instruments for data collection, techniques of data processing and analysis.

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Sources of Data
This study used panel data generated from secondary sources. The data were extracted from the annual reports and accounts of the sampled companies published by the Nigeria Stock Exchange.

Population of the study
Study population was two hundred and sixteen (216) firms listed on the Nigerian Stock Exchange as at 31st December, 2014.

Sample Size and Sampling Procedure
15 firms were drawn as sample from the population using convenience sampling technique. The companies were chosen based on accessibility and availability of financial statements. The total sample size used for this research was made up of 15 manufacturing companies namely: Cadbury Nigeria plc, Unilever Nigeria Plc, Nestle Plc, 7up Bottling company Plc, Larfage Cement PLC, Berger Nigeria Plc, Costain Nigeria Plc , Dangote cement Plc, Dangote flour Plc, Dangote sugar Plc, PZ Nigeria Plc, Okomuoil Plc, UAC Nigeria plc, Presco Nigeria Plc, AG Leventis plc.

Definition of Variable
The dependent variable is Capital Structure (combination of debt and equity) while the independent variables are interest charges, profit after tax, tax and turnover (sales).

Method of Data Analyses
Pooled Least Square regression was employed to estimate the parameters of each of the variables in the model with the use of Econometric View Software 3.1. The statistical method is considered appropriate given the objective of the study and its consistent with most previous empirical studies. The pooled least square has been used because of the panel nature of the variables used in the study for flexibility, powerful, and optimal results in predicting the explaining the set objectives from the specified model.

Model specification
The model is specified as follows:

CPS = f (EPS, INT, PAT, TAX, TVR.)

Below in equation 1 is the econometric equation for the capital structure model.

$$CPS_{it} = \alpha_0 + \beta_1 CPS_{it} + \beta_2 EPS_{it} + \beta_3 INT_{it} + \beta_4 PAT_{it} + \beta_5 TAX_{it} + \beta_6 TVR_{it} + \varepsilon_{it} \text{---}(1)$$

Where:

CPS (Capital Structure Component) = it measures the combination of debt and equity for the firms under investigation. It shows the mix of debt and equity. This was derived by adding the long-term liabilities and equity.

EPS (Earnings Per Share) = it measures the earnings power underlying each share of stock.

INT (Interest charges) = it measures the interest burden on the firm resulting from borrowing.

TAX (Tax) = it measures the incentives for more debt.

PAT (Profit after Tax) = it measures the profitability of the firm

TVR (Turnover) = it measures the business activities within the firm which accounts for the reason why the firm uses certain sources of finance.

α_0 = Constant or intercept.

B_{1-6} = Coefficients of explanatory Variable.

ε_t = Error term representing other explanatory variables that were not captured by the model.

Empirical Analysis
This section focuses on the empirical presentation of data and interpretation of the various regression results from tests carried out on the panel data for investigating the objectives of the study. The analysis started by a presentation of the descriptive statistics for the study followed by the pooled regression and a correlation matrix.

Presentation and Analysis of Data
For the data used in the study see appendix I of the paper. These data cover the variables used in the study which are as follows:
CPS = Capital Structure Component
EPS = Earnings per Share
INT = Interest charges
TAX = Tax
PAT = Profit after Tax
TVR = Turnover

Where CPS is the capital structure component and the other variable are the independent variables which are proxy for the determinants.
Below in table 1 is the descriptive statistics

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Table1:   Descriptive Statistics for the Capital Structure

	CPS	EPS	INT	PAT	TAX	TVR
Mean	4.87E+10	0.165358	8.90E+08	1.07E+10	1.79E+09	7.36E+10
Median	1.84E+10	0.089200	206000.0	9.09E+08	22686500	3.38E+10
Maximum	5.96E+11	1.960000	1.33E+10	1.60E+11	3.30E+10	9.00E+11
Minimum	-1.46E+10	-0.412000	-2.15E+08	-2.97E+09	-3.66E+08	87081663
Std. Dev.	1.06E+11	0.365948	2.33E+09	3.16E+10	4.99E+09	1.45E+11
Skewness	4.018452	2.687309	3.712894	4.195768	5.339834	4.341015
Kurtosis	19.25714	13.53031	18.25208	19.41201	33.36929	23.99011
Jarque-Bera	3782.193	1607.399	3309.334	3907.379	11918.02	5933.566
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Observations	276	276	276	276	276	276
Cross sections	6	6	6	6	6	6

Source: Authors' computation using Econometric View Software (Eview) 3.1

The probability value of the Jarque-Bera statistic which is a test of normality shows that the data are normally distributed. The values indicate high statistical significant of the variable in the specified regression model. The outliers in the model are minimized as depicted by the minima values of the standard deviation as reflected in Table 1 showing the descriptive statistic for the model. This reflects consistency of the explanatory power of the model in explaining the relationships between the variables in the study.

Presentation and Analysis of the Pooled Regression Results
The regression result is as presented below in Table2.

Table 2:   Relationship   between   Capital   Structure   and   its Determinants

Dependent Variable: CPS				
Method: Pooled Least Squares				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.92E+10	2.44E+09	7.870065	0.0000
EPS	-2.27E+10	6.10E+09	-3.725445	0.0002
INT	-5.177181	1.662664	-3.113788	0.0020
PAT	3.218181	0.164700	19.53967	0.0000
TAX	2.354582	0.707440	3.328311	0.0010
TVR	-0.008639	0.016039	-0.538620	0.5906
R-squared	0.903412	F-statistic		505.0767
Adjusted R-squared	0.901624	Prob.(F-statistic)		0.000000
Durbin-Watson stat	2.028806			

Source: Authors' computation using Econometric View Software (Eview) 3.1
The regression results are obtained using the pooled regression method that is suitable for panel data to avoid spurious regression results and ensure that the model efficiently explain variation in the dependent variable and sufficiently utilize the information provided for analysis.

The results revealed that the model for the study was able to explain approximately 90% of the systematic variation in the composition of capital structure of the firms understudied. By implication, this means that the independent variables namely; EPS, INT, PAT, TAX, and TVR account for 90% of the total adjusted systematic variations in the composition of a company capital structure. In relation to statistical significance of the independent variables in explaining the dependent variables, only TVR was not statistically significant at 5% level of significance (95% confidence level). The other variables were statistically significant at 5% level of significance. Subjecting all the independent variables to 10% level of significance revealed that all the variables were statistically significant (see Table 2). Using 1% significant level also revealed that all the independent variables except TVR were also significant. The signs of the regression results show that EPS, INT and TVR are negatively related to the capital structure of the manufacturing firm in Nigeria. The coefficients show that the explanatory variables influenced greatly the explained variables. For example, a unit change in INT will result in about 517% change in the

composition of the capital structure. So also, a unit change in PAT will result in 321% change in the composition of the capital structure.

For the overall model, the F-Statistic of 505.0767 shows a high goodness of fit of the model which supports the high value of the R-squared and Adjusted R-squared. The Durbin-Watson stat shows that there is no presence of serial correlation. This is good for the model, implying that there is no correlation between the independent variables and the error term that could lead to a 24 multi colinearity problem.

The model from the pooled regression results is as specified as follows:
CPS = 1.917576237e+10 − 2.272077324e+10*EPS − 5.177181254*INT + 3.21818087*PAT + 2.354581898*TAX − 0.008639081751*TVR--------1

Presentation of Correlation Results and Analysis
Table 3: Correlation Results for Capital Structure and its Determinants

	_CPS	_EPS	_INT	_PAT	_TAX	_TVR
_CPS	1.000000	1.000000	1.000000	1.000000	1.000000	0.996116
_EPS	1.000000	1.000000	1.000000	1.000000	1.000000	0.996116
_INT	1.000000	1.000000	1.000000	1.000000	1.000000	0.996116
_PAT	1.000000	1.000000	1.000000	1.000000	1.000000	0.996116
_TAX	1.000000	1.000000	1.000000	1.000000	1.000000	0.996116
_TVR	0.996116	0.996116	0.996116	0.996116	0.996116	1.000000

Source: Authors' computation using Econometric View Software (Eview) 3.1

The correlation matrix above indicates the existence of a relationship between the examined variables and implying that the independent variables influence the dependent variables to a great extent.

Summary of Findings, Conclusion and Recommendation
This section provides a detailed summary of findings, conclusion and recommendations.

Summary of Findings
The following are the findings of the study:
1. That there is a significant negative relationship between a firm's capital structure and the earning capacity of the firm using only equity.
2. It also revealed a negative relationship but not significant between firms' turnover and its capital structure composition. This shows that the liquidity of a firm does not have much impact in determining its capital structure decision.

3. Changes in interest charges were found to significantly affect capital structure decisions.

Conclusions

Some firm level characteristic that affect the capital structure of firms are: turnover, net total asset, profit after tax, tax and interest charges. Hence capital structure is relevant in determining the value of the firm at a particular point in time giving certain market conditions and environmental specific factors of a particular industry in a particular economy. The study concludes that the profitability of the firm and interest charges are major determinants of firm capital structure in Nigeria.

Recommendations

Following the findings of the study, the following recommendations are made:

1. The firms should strive to control and minimize its interest expenses.
2. Since profitability is a major determinant of capital structure decision, the firm should invest on only viable projects that will ensure quick return for the shareholders.
3. Managers should ensure that in carrying out their operations, the firm should maintain sufficient liquidity so as to avoid a liquidity crisis which will hinder the firm from carrying out its daily business operations, because such a crisis can affect the sales volume and ultimately profitability of the firm.

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APPENDIX 1
Financial Data of Some Manufacturing Companies Listed on the Nigerian Stock Exchange

CADBURY	2014	2013	2012	2011	2010
Turnover	30,518,586,000	35,760,753,000	33,550,501,000	34,110,547,000	29,170,000,000
Net Assets	1,705,922,000	11,844,687,000	9,258,931,000	6,356,741,000	2,100,000,000
profit after tax	1,512,687,000	6,023,219,000	3,454,991,000	3,670,555,000	1,168,000,000
liabilities	0	0	0	0	0
Equity	11,542,026,000	23,994,931,000	20,039,356,000	16,589,171,000	13,015,000,000
Tax	45,373,000	139,258,000	2,056,527,000	1,382,467,000	784,392,000
interest	0	693,334,000	14,366,000	0	0
BERGER	2014	2013	2012	2011	2010
Turnover	3,082,930,000	2,708,448,00	2,513,000,000	2,574,359,000	2,756,608,000
Net Assets	3,640,145,000	3,536,641,000	2,906,000,000	2,675,035,000	2,605,446,000
Profit after tax	148,808,000	251,348,000	192,009,000	227,816,000	442,43,000
Liabilities	121,491,000,00	0	237,672,000,00	0	130,247,000,00
Equity	2,459,830,000	2,435,702,000	11,772,000,000	1,721,450,000	1,678,532,000
Tax	-100,045,000	104,750,000	(92456000	141,509,000	777,434,000
Interest	-78733000	32,748,000	0	1,433,865,000	290,305,691
Costain	2014	2013	2012	2011	2010
Turnover	7,392,139,000	9,195,545,000	9,547,000,000	6,247,000,000	3,814,900,000
Net Assets	12,837,391,000	14,253,000,000	14,253,000,000	13,875,448,000	4,774,420,000
Profit after tax	-1,928,098,000	-1,247,256,000	97,936,000	-615,124,000	353,217,000
Liabilities	610,000,000,00	0	4,487,000,000,00	3,820,000,000	0
Equity	4,679,703,000	6,608,218,000	7,910,000,000	8,692,000,000	-932,380,000
Tax	0	-366434000	-19,871,000	-40,337,000	0
interest	236,230,000	158,014,000	0	0	338,995,000
Dangote Cement PLC	2014	2013	2012	2011	2010
Turnover	391,639,060,000	386,177,220,000	298,454,068,000	235,914,970,000	67,600,954,000
Net Assets	984,720,531,000	843,203,275,000	673,666,223,000	534,580,879,00	70,225,348,000
profit after tax	159,501,493,000	201,198,088,000	151,933,213,000	-125,909,831,000	2,722,575,000
liabilities	0	0	0	0	0
Equity	591,886,155,000	550,093,270,000	420,001,891,000	304,538,206,000	27,146,875,000
Tax	251,877,434,000	0	0	0	0
interest	690,928,000	-3146412000	0	0	0

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Dangote flour PLC	2014	2013	2012	2011	2010
Turnover	8,364,193,000	58,675,337,000	66,281,326,000	67,600,954,000	61,388,064,000
Net Assets	55,524,333,000	77,449,018,000	86,642,682,000	70,225,348,000	63,824,718,000
Profit after tax	-2,974,533,000	-2,263,336,000	649,074,000	2,722,575,000	5,561,080,000
Liabilities	0	0	0.oo	0	0
Equity	12,911,904,000	25,325,526,000	27,148,875,000	27,148,875,000	28,422,74,000
Tax	-99,366,000	1,737,015,000	109,668,000	2,189,310,000	187,024,000
interest	690,928,000	412,000	0	0	0
Dangote sugar PLC	2,014	2,013	2012	2,011	2,010
Turnover	94,855,203,000	103,153,735,000	106,868,054,000	107,218,642,000	899,804,999,000
Net Assets	92,801,302,000	83,159,877,000	83,051,450,000	72,814,642,000	62,293,982,000
Profit after tax	11,635,779,000	10,845,932,000	10,796,416,000	7,403,597,000	11,282,240,000
Liabilities	0	0	0	0	0
Equity	51,413,720,000	44,977,941,000	46,269,159,000	39,133,709,000	40,895,037,000
Tax	3,637,373,000	5,419,227,000	5,535,263,000	3,517,632,000	486,490,000
Interest	106,443,000	-67164000	0	0	1,946,000
Larfage Cement PLC	2014	2013	2012	2011	2010
Turnover	97,174,505	98,798,452	87,965,224	87,091,634	87,081,663
Net Assets	36,688,153	161,081,711	151,948,633	24,290,353	22,280,355
Profit after tax	14,722	14,611	14,712	10,349	8,655
Liabilities	-8,043	-7,557	-7,353	-7,229	-7,226
Equity	15,255,358	14,255,644	13,845,905	13,845,905	13,840,805
Tax	0	0	0	0	0
Interest	470,114,000	377,774,000	0	0	0
AG Leventis PLC	2014	2013	2012	2011	2010
Turnover	1,341,051,000	881,875,000	212,023,000	1,578,902,000	1,694,213,000
Net Assets	13,344,907,000	13,565,144,000	14,334,696,000	12,283,308,000	11,435,275,000
profit after tax	183,206,000	508,600,000	223,015,000	126,292,000	281,920,000
Equity	9,750,380,000	10,229,030,000	9,360,899,000	8,971,695,000	9,370,505,000
liabilities	0	514,539,000,00	130,137,000,000	128,33,000,000	164,372,000,000
Tax	0	0	0	0	0
interest	47,014,000	377,774,000	0	0	0
7UP Bottling Company PLC	2014	2013	2012	2011	2010
Turnover	82,450,505,000	77,888,548,000	64,088,879,000	59,864,385,000	51,098,232,000

Net Assets	67,686,839,000	55,863,209,000	51,370,170,000	48,485,662,000	40,231,991,000
Profit after tax	7,125,788,000	6,434,01,000	2,856,504,000	1,678,471,000	2,277,544,000
liabilities	4,433,469,000,00	1,433,49,000,00	4,997,584,000,00	2,313,776,000,00	(14,740,037,000,00)
Equity	51,261,632,000	47,162,040,000	49,514,245,000	19,047,155,000	16,146,,282,000
Tax	0	0	0	0	0
interest	229,531,000	0	0	0	0
NESTLE PLC	2014	2013	2012	2011	2010
Turnover	143,328,982,000	133,084,076,000	116,707,394,000	97,961,280,000	82,726,229,000
Net Asset	106,062,067,000	108,207,480,000	88,963,218,000	76,945,793,000	60,347,062,000
profit after tax	22,235,640,000	22,258,278,000	21,137,275,000	16,808,764,000	12,602,109,000
Liabilities	18,385,879,000	0	29,598,012,000	8,372,414,000,00	26,026,410,000,00
Equity	35,939,643,000	40,594,801,000	30,185,562,000	23,492,887,000	14,865,353,000
Tax	2,210,338,000	5,419,227,000	5,535,263,000	3,517,632,000	4,864,690,000
Interest	5,305,837,000	-214669700	5,535,263,000	3,517,632,000	4,864,690,000
UnileverNigeria Plc	2,014	2,013	2,012	2,011	2,010
Turnover	55,754,309,000	600,004,119,201	55,647,797,896	54,724,749,000	46,807,000,000
Net Asset	45,736,255,000	43,754,114,227	36,497,624,059	32,249,926,262	8,335,000,000
profit after tax	2,412,343,000	4,808,907,383	5,597,613,329	5,515,212,597	4,180,000,000
Liabilities	12,060,749,000,000	782,073,524,00	0	0	10,008,000,000
Equity	7,478,808,000	9,639,695,298	10,043,523,514	9,634,648,320	8,335,000,000
Tax	0	0	0	0	405,097,000
Interest	0	3,707,533,000	1,335,505,000	972,027,000	0
UAC Nigeria PLC	2,014	2,013	2,012	2,011	2,010
Turnover	11,700,506,000	11,298,899,000	12,039,603,000	10,754,451,000	8,194,000,000
Net Asset	68,087,621,000	66,551,713,000	69,016,389,000	65,369,873,000	69,531,311,000
Equity	36,052,766,00	33,426,273,000	29,961,869	30,193,733,000	29,889,711,000
profit after tax	3,589,075,000	3,155,419,000	2,180,310,000	1,999,301,000	2,278,026,000
Liabilities	7,501,530,000,00	0	0	0	10,961,000,000,00
Tax	0	3,707,533,000	1,335,505,000	972,027,000	0
interest	0	3,707,533,000	1,335,505,000	972,027,000	0
PZ Nigeria PLC	2014	2,013	2,012	2,011	2,010
Turnover	71,343,088,000	72,154,601,000	65,877,984,000	62,667,910,000	63,800,733,000
Net Asset	72,296,420,000	64,406,797,000	68,926,529,000	58,968,077,000	54,896,209,000

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Equity	24,370,445,000	42,868,042,000	41,193,341,000	38,707,544,000	35,565,450,000
profit after tax	5,321,187,000	2,538,846,000	5,697,066,000	5,584,642,000	5,330,900,000
liabilities	0	0	0	0	0
Tax	2,329,078,000	1,768,017,000	-23,282,000,000	2,366,806,000	-2,340,187,000
interest	229,531,000	0	0	0	0
OKOMUOIL PLC	2,014	2,013	2,012	2,011	2,010
Turnover	10,146,164,000	11,121,011,000	6,087,836,000	4,741,217,000	4,734,193,000
Net Asset	31,054,673,000	12,051,224,000	8,668,128,000	8,676,223,000	7,668,859,000
Equity	25,530,751,000	8,836,256,000	5,866,408,000	4,353,494,000	4,734,193,000
Profit after tax	3,590,763,000	392,376,000	1,629,456,000	54,952,424,000	1,207,460,000
Liabilities	0	16,613,600,000	1,822,416,000,000	0	0
Tax	547,865,000	-734,681,000	-34,180,600	-112,217,000	-32,578,000
interest	0	25,966,000	91,459,000	0	0

APPENDIX II
Information for Econometric Analysis Using Review

CPS	EPS	INT	PAT	TAX	TVR
1.15E+10	0.131000	0.000000	1.51E+09	45373000	3.05E+10
2.40E+10	0.251000	6.93E+08	6.02E+09	1.39E+08	3.58E+10
2.00E+10	0.173000	14366000	3.45E+09	2.06E+09	3.36E+10
1.66E+10	0.221000	0.000000	3.67E+09	1.38E+09	3.41E+10
1.30E+10	0.090000	0.000000	1.17E+09	7.84E+08	2.92E+10
2.58E+09	0.060600	-78733000	1.49E+08	-1.00E+08	3.08E+09
2.44E+09	0.103000	32748000	2.51E+08	1.05E+08	2.71E+08
1.20E+10	0.016300	0.000000	1.92E+08	NA	2.51E+09
1.72E+09	0.133000	1.43E+09	2.28E+08	1.42E+08	2.57E+09
1.81E+09	0.026300	2.90E+08	44243000	7.77E+08	2.76E+09
5.29E+09	-0.412000	2.36E+08	-1.93E+09	0.000000	7.39E+09
6.61E+09	-0.189000	1.58E+08	-1.25E+09	-3.66E+08	9.20E+09
1.24E+10	0.012400	0.000000	97936000	-19871000	9.55E+09
1.25E+10	-0.070800	0.000000	-6.15E+08	-40337000	6.25E+09
2.89E+09	-0.379000	3.39E+08	3.53E+08	0.000000	3.81E+09
5.96E+11	0.270000	3.30E+09	1.60E+11	3.30E+10	3.92E+11
5.54E+11	0.365000	NA	2.01E+11	NA	3.86E+11
4.24E+11	0.362000	1.33E+10	1.52E+11	0.000000	2.98E+11
3.08E+11	-0.413000	NA	-1.26E+11	0.000000	2.36E+11
3.10E+10	0.100000	NA	2.72E+09	0.000000	6.76E+10
1.67E+10	-0.230000	6.91E+08	-2.97E+09	-99366000	8.36E+09
2.91E+10	-0.089300	412000.0	-2.26E+09	1.74E+09	5.87E+10
3.10E+10	0.023900	0.000000	6.49E+08	1.10E+08	6.63E+10
3.10E+10	0.100000	0.000000	2.72E+09	2.19E+09	6.76E+10
3.85E+09	1.960000	0.000000	5.56E+09	1.87E+08	6.14E+10
5.52E+10	0.226000	1.06E+08	1.16E+10	3.64E+09	9.49E+10
4.88E+10	0.240000	-67164000	1.08E+10	5.42E+09	1.03E+11
5.01E+10	0.233000	0.000000	1.08E+10	5.54E+09	1.07E+11
4.30E+10	0.189000	0.000000	7.40E+09	3.52E+09	1.07E+11
4.47E+10	0.276000	1946000.	1.13E+10	4.86E+08	9.00E+11
15247315	0.000965	4.70E+08	14722.00	0.000000	97174505
14248087	0.001020	3.78E+08	14611.00	0.000000	98798452
13838552	0.001060	0.000000	14712.00	0.000000	87965224
13838676	0.000747	0.000000	10349.00	0.000000	87091634
13833579	0.000625	0.000000	8655.000	0.000000	87081663
9.75E+09	0.000000	47014000	1.83E+08	0.000000	1.34E+09
1.07E+10	0.009880	3.78E+08	5.09E+08	0.000000	8.82E+08
1.39E+11	0.001720	0.000000	2.23E+08	0.000000	2.12E+08

9.10E+09	0.009840	0.000000	1.26E+08	0.000000	1.58E+09
1.74E+11	0.001720	0.000000	2.82E+08	0.000000	1.69E+09
5.57E+10	0.139000	2.30E+08	7.13E+09	0.000000	8.25E+10
4.86E+10	0.013600	0.000000	6.43E+08	0.000000	7.79E+10
5.45E+10	0.057800	0.000000	2.86E+09	0.000000	6.41E+10
2.14E+10	0.088400	0.000000	1.68E+09	0.000000	5.99E+10
-1.46E+10	0.142000	0.000000	2.28E+09	0.000000	5.11E+10
5.43E+10	0.618000	5.31E+09	2.22E+10	2.21E+09	1.43E+11
4.06E+10	0.549000	-2.15E+08	2.23E+10	5.42E+09	1.33E+11
5.98E+10	0.699000	5.54E+09	2.11E+10	5.54E+09	1.17E+11
3.19E+10	0.715000	3.52E+09	1.68E+10	3.52E+09	9.80E+10
4.09E+10	0.846000	4.86E+09	1.26E+10	4.86E+09	8.27E+10
NA	0.322000	0.000000	2.41E+09	0.000000	5.58E+10
NA	0.499000	3.71E+09	4.81E+09	0.000000	6.00E+11
NA	0.560000	1.34E+09	5.60E+09	0.000000	5.56E+10
NA	0.573000	9.72E+08	5.52E+09	0.000000	5.47E+10
NA	0.501000	0.000000	4.18E+09	4.05E+08	4.68E+10
NA	0.004810	0.000000	3.61E+09	0.000000	1.17E+10
NA	0.000000	3.71E+09	3.34E+10	0.000000	1.13E+10
NA	0.000000	1.34E+09	29961869	0.000000	1.20E+10
NA	0.000000	9.72E+08	3.02E+10	0.000000	1.08E+10
NA	0.027200	0.000000	2.99E+10	4.05E+08	8.19E+09
NA	0.000000	2.30E+08	2.44E+10	2.33E+09	7.13E+10
NA	0.000000	0.000000	4.29E+10	1.77E+09	7.22E+10
NA	0.000000	0.000000	4.12E+10	-2.33E+10	6.59E+10
NA	0.000000	0.000000	3.87E+10	2.37E+09	6.27E+10
NA	0.000000	0.000000	3.56E+10	-2.34E+09	6.38E+10
NA	0.000000	0.000000	2.55E+10	5.48E+08	1.01E+10
NA	0.533000	25966000	8.84E+09	-7.35E+08	1.11E+10
NA	0.003230	91459000	5.87E+09	-34180600	6.09E+09
NA	0.000000	0.000000	4.35E+09	-1.12E+08	4.74E+09
NA	NA	NA	NA	NA	NA

Biographical Notes

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