



## Payable Management on Corporate Profitability of Brewery Manufacturing Companies in Nigeria.

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**ABSTRACT:-** This study examines the effect of the management of accounts payable on the profitability of Brewery companies in Nigeria. The variables include, Accounts payable, Debt ratio and sales growth rate. Secondary sources of data were used for the period 2000-2011. The hypotheses were tested using multiple regression analytical tools. The results show that accounts payable had negative but non significant relationship with profitability ratio of the companies under Brewery manufacturing companies in Nigeria. Debt ratio had positive and significant relationship, while sales growth rate was negative and significant with the profitability ratio of Brewery companies in Nigeria.

**Keywords:-** Payable, Profitability and Multiple regression.

### I. INTRODUCTION

Accounts payable are suppliers whose invoices for goods or services have processed but who have not yet been paid. Organizations often regard the amount owing to creditors as a source of free credit. Accounts payable ratio (AP) represents the rate firms pay to their suppliers. It is one of the major sources of secured short-term financing (Gitman, 2009). Utilizing the value of relationship with payee is a sound objective that should be highlighting as important as having the optimal level of preventions. As a consequence, strong alliance between company and its suppliers will strategically improve production lines and strengthen credit record for future expansion. Singh,(2004) stated that the liquidity of positionary firm mainly depends upon accounts receivable and payable deferred policy as well as inventories conversion period of firm. Creditor is a vital part of effective cash position. Purchasing initiates cash outflows and overzealous purchasing function can create liquidity problem. There is an adage in business that if you can buy well then you can sell well. Management of your creditors and suppliers is just as important as the management of your debtors.

#### Statement of problem

Some manufacturing firms that are still in business and are listed in Nigeria stock exchange cannot pay dividend to shareholder in their companies example champion breweries has not paid since 1988, golden breweries has not paid since 1997 (Salandeen, 2001). Some Nigeria workers were forcefully disengaged from their services example Ajaokuta steel industry reduced their staff from 5000 to 1000 in 2007. it is as a result of the above problem that the researchers deemed it necessary to examine the effect of payable management on corporate profitability of Brewery manufacturing companies quoted in the Nigerian stock exchange.

#### Objectives of the Study

The general objective of this study is to examine the effect of payable management on the profitability of Brewery manufacturing companies in Nigeria. The specific objectives of the study are:-

1. To examine the effect of accounts payable on corporate profitability.
2. To identify the effect of debt on the profitability of Brewery companies in Nigeria.
3. To examine the effect of sales growth on corporate profitability.

#### Hypotheses

The following hypotheses shall be proved in order to address the objectives.

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1. There is no significant relationship between account payable and profitability of food and beverages companies in Nigeria.
2. There is no significant relationship between debt and profitability
3. Sales growth has no significant relationship on corporate profitability.

## **II. REVIEW OF RELATED LITERATURE**

Ranchandran, A and Janakiraman, M, (2009), Analyzed the relationship between working efficiency and earnings before interest and tax of the paper Industry in Indian capital management. The study revealed that capital conversion cycle and inventory days had negative correlative with earnings before interest and tax, while accounts payable days and accounts receivable days related positively with earnings before interest and tax. Grzegor M.M (2008) in his study a portfolio management approach in accounts receivable management, used portfolio management theory to determine the level of accounts receivable in a firm he paid out that there was an increase in level of accounts receivable in a firm increase both net working capital and cost of holding and managing account receivables.

In ksenija (2013), he investigates how public companies listed at the regulated market in the republic of Serbia manage their accounts receivable during recession times. A sample of 108 firms is used. The accounts receivables polices are examined in the crisis period of 2008-2011. The short-term affects are tested and the study shows that between accounts receivables and two dependent variables on profitability, return on total asset and operating profit margin, there is a positive but no significant relation. This suggests that the impact of receivables on firm's profitability is changing times of crisis.

Researcher studies by Deloof (2003) Laziridis and Tryfonidis (2006) Garcia-Jeruel and Martinez-Solano (2007), Samiloglu and Demrigunes (2008) and Mathura (2010), in belginm, Greece, U.S.A, Spain, turkey and Kenya respectively, all point out to a negative relation between accounts payable and firm profitability. Contradicting evidence is found by Sharma and Kumar (2011) who find a positive relation between ROA and accounts receivable.

Singh and Randey (2008) had an attempt to study the working capital components and its impact on profitability of Hildalco industries limited for a period 1990 to 2007. Results of the study showed that payable turnover ratio had statistical significant impact on the profitability of Hildalco industries limited s

Venkata et al (2013):- Their study impact of receivables management on working capital and profitability : A study of selected cement companies in Indian collected their data from the annual reports the selected cement companies from 2001 -2010. the ratios which highlight the efficiency of receivables management viz, receivables to current assets ratio receivable to total assets ratio, receivable to turnover ratio, average collection period, working capital ratio profitability ratio have been completed using ANOVA statistical tool to know the impact of working capital and profitability of the selected cement companies. Working capital management and profitability were considered as dependent variables. The investigation reveals that the receivable management across cement industry is efficient and showing significant impact on working capital and profitability.

## **III. RESEARCH METHODOLOGY**

The research work focuses on the empirical analysis of the relationship between payable management and corporate profitability in some selected manufacturing companies in Nigeria. The ex-post factor research design was used because it involves events that have already taken place in the past. The records observed were from 2000-2011, a period of twelve years. The variables tested were accounts payable, return on total assets, debt and sales.

### **Population and Sample Size**

The population of this study comprises of all manufacturing companies quoted in the Nigeria stock exchanges. The sample size consists of only companies in the Brewery sub-sector of manufacturing sector, and it is dependent on data availability.

### **Nature and Sources of Data**

The study used secondary data that were extracted from the selected food and beverages manufacturing companies. Data from Annual Reports are proven to be more reliable because companies are required to keep accounts and to produce accounts that give true and fair view of their company according to companies and allied matters decree 1990. The data for the study are profit before tax, total assets, payables, long term debt, sales.

### **Descriptive Variables**

The researchers made their choice primary guided by precious empirical studies along this line; variables are consistent with basley and brnigham (2005) samiloglu and demrigunes (2008). Profitability is the

dependent variable of this study. Return on total assets was used to analyze the impact of accounts Payable management on the firm's profitability (Pandey, 2008, Iazarridis and Trynidis, 2006).

$$\text{Profitability} = \frac{\text{PBT}}{\text{Total asset}}$$

### Independent Variables

#### Accounts Payable

Accounts payables are customers who have not yet made payment for goods or services which the firm has provided. In this respect account receivable is calculated as accounts payables divided by cost of sales. This variable represents the payables that the firm will pay from to customers (Basley and bringham, 2005 Samiloglu and Demrigunes, 2008).

$$\text{Account payables} = \frac{\text{payables[creditors]}}{\text{Cost of sales}}$$

#### Debt

When external funds are borrowed,, example from banks at a fixed rate they are assured to be invested in the company and a higher interest paid to the bank. This is measured by long term debt divided by total assets.

$$\text{Debt} = \frac{\text{Total debt}}{\text{Total assets}}$$

#### Sales Growth

Sales growth is the increase or decrease of annual sales measured as a percentage. It is measured in this study as sales-sales divided by sales.

$$\text{Sales} = \frac{\text{Sales-Sales}}{\text{Sales}}$$

#### Analytical Tool for the Test of Hypotheses

The complicated data were analyzed using four functional models of multiple regression, and the best fitted to the analysis was selected. This four multiple regression models are as follows:-

a. 1 Linear regression model:

$$\text{Profitability} = B_0 + B_1 (\text{AP}) + B_2(\text{SL}) + B_3(\text{DT}) + U_1 \dots \dots \dots$$

b. Semi - log regression Model:

$$\text{Profitability} = \text{Log } B_0 + \text{Log } B_1 (\text{AP}) \text{Log} + B_2(\text{SL}) + B_3(\text{DT}) + U_1 \dots \dots \dots$$

c. Double log regression Model:

$$\text{Profitability} = \text{Log } B_0 \text{log} + B_1 (\text{AP}) + B_2(\text{SL}) + B_3(\text{DT}) + U_1 \dots \dots \dots$$

d. Exponential regression Model:

$$\text{Log profitability } B_0 + B_1 (\text{AP}) + B_2(\text{SL}) + B_3(\text{DT})$$

After obtaining the result of the four functional multiple regression model, decisions were taken on which among then should be chosen as the best-fit model in the analysis, the choice model were used in the interpretation of the results. Decisions and choice model were based on the one that has the highest number of variables.

Below presents data for return on asset, accounts payable, debt ratio as well as the sales growth for Guinness Nigeria Plc.

#### Data Presentation Raw Data for Guinness Nigeria Plc.

Years	Return on Asset Ratio	Accounts Payable Ratio	Debt Ratio	Sales Growth Rate (%)
2000	2.247028	0.819921	0	8008.361
2001	2.373897	0.886579	0	34.14634
2002	2.475667	0.809349	0	48.61583
2003	2.782544	0.717165	0	28.98812
2004	3.225994	0.863647	0	24.68406
2005	2.295494	0.577808	0	-1.36635
2006	2.175907	0.649673	0	14.49534
2007	2.26966	4.611446	0	16.0547
2008	1.985516	0.481756	0	11.09354
2009	1.874018	0.386106	0	28.87745
2010	0.242115	0.383124	0.01573	22.67995
2011	0.283829	0.383899	0.014344	13.07172

**Source: Author's Computation from Annual Accounts of Firm 2000-2011.**

Guinness Plc made enough profit in all the years except in 2010 and 2011. They really preformed well. They did not have too much to pay except in 2007 when they had so much to pay. They borrowed in only 2010 and 2011, but did not borrow in other years. They also made huge sales except in 2005.

**Raw Data for Nigeria Breweries Plc.**

Years	Return on Asset Ratio	Accounts Payable Ratio	Debt Ratio	Sales Growth Rate (%)
2000	0.187997	1.330301	0	-79.1743
2001	0.20132	1.47014	0	49.25301
2002	0.157326	2.274686	0.000232	11.49092
2003	0.12917	2.048696	0	32.02814
2004	0.135789	1.606228	0	34.72451
2005	0.178149	0.517608	0	5.119847
2006	0.217247	0.389265	0	7.726235
2007	0.307862	0.079327	0	29.45506
2008	0.342777	0.270764	0	17.61987
2009	0.386958	0.278626	0	24.93084
2010	0.392346	0.25832	0	13.18821
2011	5.305932	0.261137	0.033012	-89.4971

**Source: Author's Computation from Annual Accounts of Firm 2000-2011.**

This company made the highest profit in 2010 with return on asset ratio of 0.392, it also has little to receive but more to pay. They borrowed only in 2002 and 2011, but the ratio is low. The sales growth rate is high except in 2006 and 2011 where they have negative ratio.

**Breweries Sub-Sector**

Based on data availability, the selected firms in this sub-sector include; Guinness Nigeria plc and Nigeria Breweries plc.

The table below presents the descriptive statistics of Breweries sub-sector of manufacturing firms in Nigeria.

**Descriptive statistics showing minimum, maximum, mean, standard deviation and variance values of variables for the Brewery Sector**

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
<b>Profit</b>	24	.1358	5.3059	1.346018	1.3698844	1.877
<b>ACCOUNTS PAYABLE</b>	24	.0793	4.6114	.950503	.9878821	.976
<b>DEBT</b>	24	.0000	.0330	.002641	.0077337	.000
<b>SALES GROWTH</b>	24	-89.4971	49.2500	15.602198	26.4026953	697.102
<b>Valid N (listwise)</b>	24					

*Source: computed from Handpicked Data from the Annual Reports and Accounts of 2 quoted companies, 2000 - 2011, and the Fact book, 2010/2011 for firms in the Breweries Sector*

This company did not borrow any debt during the period under study.

They owe their suppliers at the average rate of .9505, which is far more than their receivable. This sub-sector is not managing their payable well even though they made profit of 1.3460(mean) during the years under study.

**A Cross section comparison of minimum, maximum and mean values of Variables in the Brewery sub-sector**

Variables	Measures	Guinness	Nigerian Breweries
Profitability	Mean	2.0193	0.6727
	Maximum	3.2260	5.3059
	Minimum	0.2421	0.1358
Account payable	Mean	0.9658	0.9351
	Maximum	4.6114	2.2747
	Minimum	0.3831	0.0793
Debt	Mean	0.0025	0.0027
	Maximum	0.0157	0.0330
	Minimum	0.0000	0.0000

Source: Researchers Compilation based on SPSS computation, Version 17.1 Analytical software

Guinness brewery performed better than Nigeria Bottling Company. With means of 2.02 and 0.67 respectively. The sales growth of Guinness is very high and they have much to pay. This implies that they can be able to pay their creditors since they made enough profit. Both companies did not borrow.

**Guinness**

**Multiple Regression Analysis showing the relationship between Profitability ratio and AP, DT and SL of Guinness Nigeria Plc**

Variables	Linear Regression	Semi Log Regression	Double Log Regression	Exponential Regression
Constant	6.652** (3.145)	2.320*** (26.798)	3.751 (1.773)	1.116** (3.185)
Accounts Payable Ratio (AP)	-0.254 (-0.919)	-1.123*** (-7.990)	3.517* (2.246)	-0.045 (-0.990)
Debt Ratio (DT)	-235.70** (-2.995)	3.482*** (11.285)	0.611 1.779	-79.904*** (-6.128)
Sales Growth Rate (SL)	-0.016 (-1.080)	0.021 (0.763)	-1.206** (-2.990)	-0.003 (-1.227)
R <sup>2</sup>	0.929	0.991	0.710	0.989
Adjusted R <sup>2</sup>	0.843	0.981	0.202	0.967
F-Ratio	10.862***	96.284***	1.399	74.505

NB:  $1. Profitability = B_0 + B_1(AP)_i + B_2(DT)_i + B_3(SL)_i + U_i$

2. Also, 1%, 5%, 10% levels of significance are represented by \*\*\*, \*\* and \* respectively

3. Values in brackets are coefficients while those outside brackets are t-values of the variables

Specifically, the industries' AP had significant but negative relationships with the profitability ratio at 10% and 1% levels of significance respectively. This means that unit increases in the variable shall bring about corresponding decreases in the profitability ratio of the industries in Nigeria. Positive and significant relationship with profitability ratio, while sales growth rate had negative and significant relationship with the profitability of Guinness PLC

**Multiple Regression Analysis showing the relationship between Profitability ratio and AP, DT and SL of Nigerian Breweries PLC**

Variables	Linear Regression	Semi Log Regression	Double Log Regression	Exponential Regression
Constant	0.376 (2.034)	-2.822 (-1.515)	-2.995** (-4.134)	-0.445 (-1.358)
Accounts Payable Ratio (AP)	-0.103 (-1.018)	5.440** (3.245)	-0.371 (-0.393)	-0.186 (-1.037)
Debt Ratio (DT)	168.586*** (5.898)	1.271 (1.634)	-0.208 -0.905	55.133 (1.089)
Sales Growth Rate (SL)	0.002 (0.716)	-0.931 (-2.035)	0.466 (1.222)	0.003 (0.556)

<b>R<sup>2</sup></b>	0.999	0.935	0.710	0.948
<b>Adjusted R<sup>2</sup></b>	0.996	0.820	0.202	0.857
<b>F-Ratio</b>	421.425***	8.168**	1.399	10.403**

NB: 1. Profitability =  $B_0 + B_1(AR)_{ii} + B_2(STO)_{ii} + B_3(AP)_{ii} + B_4(CCC)_{ii} + B_5(LQ)_{ii} + B_6DT(control)_{2i} + B_7SL(control)_{2i} + U_i$

2. Also, 1%, 5%, 10% levels of significance are represented by \*\*\*, \*\* and \* respectively

3. Values in brackets are coefficients while those outside brackets are t-values of the variables

Specifically the results showed that AP had significant negative relationships with the industries' profitability ratio at 1% and 5% levels of significance respectively. This implies that a unit increase in the variables shall bring about corresponding decrease in the profitability ratio of Nigerian Breweries PLC. On the hand Debt ratio had negative and non significant relationship with profitability ratio, while sales Growth rate had

### Test of hypotheses

#### Hypotheses 1

H<sub>0</sub> There is no significant relationship between account payable ratio and profitability of Brewery companies in Nigeria.

H<sub>1</sub> There is a significant relationship between account payable and profitability of Brewery companies in Nigeria.

#### Multiple Regression Analysis showing the relationship between Profitability and AP, DT and SL of Brewery firms in Nigeria

Variables	Linear Regression	Semi Log Regression	Double Log Regression	Exponential Regression
<b>Constant</b>	-1.286 (-1.274)	1.756* (1.985)	-1.868*** (-3.381)	-1.436*** (-3.829)
<b>Accounts Payable Ratio (AP)</b>	0.111 (0.143)	1.930* (1.999)	-0.616 (-1.568)	-0.040 (-0.141)
<b>Debt Ratio (DT)</b>	-43.374 (-0.546)	1.316* (1.822)	0.055 (0.308)	-29.812 (-1.010)
<b>• Sales Growth Rate (SL)</b>	0.025* (-1.765)	-0.219 (-0.909)	0.086 (0.396)	-0.009 (-1.695)
<b>R<sup>2</sup></b>	0.588	0.359	0.362	0.629
<b>Adjusted R<sup>2</sup></b>	0.408	0.078	0.083	0.467
<b>F-Ratio</b>	3.266**	1.278	1.297	3.876**

NB: 1. Profitability =  $B_0 + B_1(AR)_{ii} + B_2(STO)_{ii} + B_3(AP)_{ii} + B_4(CCC)_{ii} + B_5(LQ)_{ii} + B_6DT(control)_{2i} + B_7SL(control)_{2i} + U_i$

2. Also, 1%, 5%, 10% levels of significance are represented by \*\*\*, \*\* and \* respectively

3. Values in brackets are coefficients while those outside brackets are t-values of the variables

The results of multiple regression analysis for the variables influencing the profitability ratio of Breweries industries in Nigeria were summarized in the Table above. Out of the four functional models of the multiple regression calculated, the Exponential Regression model was chosen because it has the highest number of significant variables as well as a very significant F-ratio (3.876\*\*) value which indicated that the choice model suited the analysis. Furthermore, the results of the analysis revealed an R<sup>2</sup> value of 0.629 thus indicating that 62.9% variation in the profitability ratio (dependent) variable of Breweries Industries in Nigeria was accounted for by the explanatory (independent variables) considered in the analysis. Specifically the industries' AP had negative and non-significant relationship with the profitability ratio at 1% levels of significance. This means that unit increase in the variable shall bring about corresponding decrease in the profitability ratio of Brewery industries in Nigeria.

Hypotheses 2

H<sub>0</sub> There is no significant relationship between debt ratio and profitability ratio.

H<sub>i</sub> There is a significant relationship between debt ratio and profitability ratio.

**Multiple Regression Analysis showing the relationship between Profitability and AP, DT and SL of Brewery firms in Nigeria**

Variables	Linear Regression	Semi Log Regression	Double Log Regression	Exponential Regression
Constant	-1.286 (-1.274)	1.756* (1.985)	-1.868*** (-3.381)	-1.436*** (-3.829)
Accounts Payable Ratio (AP)	0.111 (0.143)	1.930* (1.999)	-0.616 (-1.568)	-0.040 (-0.141)
Debt Ratio (DT)	-43.374 (-0.546)	1.316* (1.822)	0.055 (0.308)	-29.812 (-1.010)
• Sales Growth Rate (SL)	0.025* (-1.765)	-0.219 (-0.909)	0.086 (0.396)	-0.009 (-1.695)
R <sup>2</sup>	0.588	0.359	0.362	0.629
Adjusted R <sup>2</sup>	0.408	0.078	0.083	0.467
F-Ratio	3.266**	1.278	1.297	3.876**

NB:  $1. Profitability = B_0 + B_1(AR)_{ii} + B_2(STO)_{ii} + B_3(AP)_{ii} + B_4(CCC)_{ii} + B_5(LQ)_{ii} + B_6DT(control)_{2i} + B_7SL(control)_{2i} + U_i$

2. Also, 1%, 5%, 10% levels of significance are represented by \*\*\*, \*\* and \* respectively

3. Values in brackets are coefficients while those outside brackets are t-values of the variables

The results of multiple regression analysis for the variables influencing the profitability ratio of Breweries industries in Nigeria were summarized in Table above. Out of the four functional models of the multiple regression calculated, the Exponential Regression model was chosen because it has the highest number of significant variables as well as a very significant F-ratio (3.876\*\*\*) value which indicated that the choice model suited the analysis. Furthermore, the results of the analysis revealed an R<sup>2</sup> value of 0.629 thus indicating that 62.9% variation in the profitability ratio (dependent) variable of Breweries Industries in Nigeria was accounted for by the explanatory (independent variables) considered in the analysis. Specifically the results showed that Debt ratio had negative and significant relationship; this shows that as this variable increases, the profitability ratio decreases. Hence, we reject the alternate.

Hypotheses 3

H<sub>0</sub> Sales growth has no significant relationship on corporate profitability

H<sub>i</sub> Sales growth has significant relationship on corporate profitability

**Multiple Regression Analysis showing the relationship between Profitability and AP, DT and SL of Brewery firms in Nigeria**

Variables	Linear Regression	Semi Log Regression	Double Log Regression	Exponential Regression
Constant	-1.286 (-1.274)	1.756* (1.985)	-1.868*** (-3.381)	-1.436*** (-3.829)
Accounts Payable Ratio (AP)	0.111 (0.143)	1.930* (1.999)	-0.616 (-1.568)	-0.040 (-0.141)
Debt Ratio (DT)	-43.374 (-0.546)	1.316* (1.822)	0.055 (0.308)	-29.812 (-1.010)
Sales Growth Rate (SL)	0.025* (-1.765)	-0.219 (-0.909)	0.086 (0.396)	-0.009 (-1.695)
R <sup>2</sup>	0.588	0.359	0.362	0.629

<b>Adjusted R<sup>2</sup></b>	0.408	0.078	0.083	0.467
<b>F-Ratio</b>	3.266**	1.278	1.297	3.876**

NB: 1.  $Profitability = B_0 + B_1(AR)_{it} + B_2(STO)_{it} + B_3(AP)_{it} + B_4(CCC)_{it} + B_5(LQ)_{it} + B_6DT(control)_{2i} + B_7SL(control)_{2i} + U_i$

2. Also, 1%, 5%, 10% levels of significance are represented by \*\*\*, \*\* and \* respectively

3. Values in brackets are coefficients while those outside brackets are t-values of the variables

This hypothesis was used to test the sales growth rate of these companies under study. Specifically the results showed that sales growth rate had negative but non significant effect on profitability of the companies under study.

#### IV. CONCLUSION

Accounts Payable is a very important facet of financial management. There is a continuous growth and survival of firms if it is managed adequately. The aim of this study is to critically examine the management of accounts payable on corporate profitability of Brewery manufacturing companies in Nigeria. Exponential Regression-Model was used in the test of hypotheses. It was found out that Accounts payable (AP) had negative and non-significant relationship with the profitability ratio of the companies under study, sales growth rate had Negative and significant effect, while debt ratio had also negative and non-significant relationship on the profitability of Brewery companies in Nigeria.

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