

EFFECT OF CORPORATE GOVERNANCE ON BORROWING COST OF QUOTED BREWERY FIRMS IN NIGERIA (2010-2015)

Amahalu Nestor Ndubuisi (PhD)^{1*}, Abiahu Mary-Fidelis C², Nweze Chike Leonard³, Obi Juliet Chinyere⁴

¹ Department of Accountancy Nnamdi Azikiwe University Awka, Anambra State

² Department of Accountancy Nnamdi Azikiwe University Awka, Anambra State, f.abiahu@unizik.edu.ng

³ Department of Accountancy Nnamdi Azikiwe University Awka, Anambra State, nwezeleonard@yahoo.com

⁴ Department of Accountancy University of Nigeria, Nsukka Enugu Campus, Enugu State, Julietchinyere6@gmail.com

*Corresponding Author:

E-mail: nn.amahalu@unizik.edu.ng

Abstract:-

The main objective of this study is to ascertain the determinants of audit quality in Nigeria. The specific objectives are to ascertain the effect or otherwise of Board size, ownership concentration and Board independence on borrowing cost of brewery firms listed on the floor of Nigeria Stock Exchange from 2010-2015. Ex-post fact research design was used for this study. Secondary data were sourced from the publications of Nigeria stock exchange. Inferential statistics of the hypotheses were carried out with the aid of E-view 9.0 statistical software using co-efficient of correlation and ordinary least square (OLS) regression. In a bid to determining the validity of the data used Granger causality test was used. Findings of this study shows that Board size, ownership concentration and Board independence have a positive and statistically significant effect on borrowing cost at 5% significance level. It is recommended among others that there should be an increase in board independence since it significantly decreases a firm's cost of capital and increases firm's valuation.

Keywords: - Corporate Governance, Borrowing Cost, Cost of Capital.

BACKGROUND TO THE STUDY

Decisions and judgment in selecting the most appropriate investment manner with the goal of shareholder wealth maximization is a very important issue in the corporate world (Bae & Goyal, 2010). To achieve the above objective, increasing the income earned from investments and minimize the cost of financing is considered both appropriate. Internationally diversified firms create a more complex information environment, and investors generally are more informed about a firm's domestic operations than about its foreign operations. Precisely because information is asymmetrical, external financing is more costly than internal free cash flows of investments (Chiang & KO, 2009).

Corporate finance plays an important role in corporate management and financial decisions.

Financing is considered as the most important factors affecting in Financial and management decisions. Managers use the following financing: 1) adoption of capital budgeting, 2) to establish the optimal structure, 3) decisions regarding long-term lease, 4) Replacement of the bonds, 5) Working Capital Management and 6) and other similar cases (Ahmadpoor, Kashani-Poor, &, Shojai, 2011).

It is important for managers to assess the cost of financing because with this way, managers can evaluate investment projects and determine their capital budgeting. So investors are expected to pay assess the overall risks and benefits, thereby assessing the activities of the company (Klapper & Love, 2004). Financing concept is based on the assumption that the company's goal is to maximize shareholder wealth. In fact, there is a relationship between company's financing decisions and investment decisions (Stulz, 1999 in Sharbati, Aslani & Barandagh, 2014).

Borrowing costs are interest and other costs incurred by an enterprise in connection with the borrowing of funds.

Borrowing costs may include:

- a) Interest and commitment charges on bank borrowings and other short-term and long-term borrowings;
- b) Amortization of discounts or premiums relating to borrowings;
- c) Amortization of ancillary costs incurred in connection with the arrangement of borrowings;
- d) Finance charges in respect of assets acquired under finance leases or under other similar arrangements; and
- e) Exchange differences arising from foreign currency borrowings to the extent that they are regarded as an adjustment to interest costs (AS: 16, 1995).

The excess interest shall consume several ways:

- 1) The company paid more dividends; this amount is distributed to ordinary shareholders.
- 2) The company to invest reinvested profits and thereby increase the rate of return periods.
- 3) The combination of these two methods.

The result become utility common stock higher from point of shareholders and increased demand will led to an increase in the market price of the common stock and thereby increased the wealth of shareholders and the company is funded (Raymond, 1989 in Sharbati, Aslani & Barandagh, 2014). Corporate governance refers to the system by which corporations are directed and controlled.

The governance structure specifies the distribution of rights and responsibilities among different participants in the corporation (such as the board of directors, managers, shareholders, creditors, auditors, regulators, and other stakeholders) and specifies the rules and procedures for making decisions in corporate affairs. Governance provides the structure through which corporations set and pursue their objectives, while reflecting the context of the social, regulatory and market environment. Governance is a mechanism for monitoring the actions, policies and decisions of corporations. Governance involves the alignment of interests among the stakeholders (Tricker, 2009; Rezaee, 2002). Overall, most researchers deemed that proper corporate governance could effectively reduce debt financing cost.

Statement of Problem

Within a debt economy, companies turn to debt financing. Yet, such a debt is not without cost. Indeed, agency conflicts existence support to the lenders a double risk. The first one is the shareholders expropriation behavior. The second is the misappropriation by the company of a part of the investment earnings. For these reasons, lenders are demanding a higher cost debt. Reinforcing the corporate governance quality could reduce these costs. Morellec and Schürhoff (2011) show that information disclosure and corporate governance mechanisms have an effect on the cost of equity capital. The major difference between debt and equity capital is the control effectiveness by lenders. In fact, debt holders have no effective control on the use of the funds they provide. These funds can then be used opportunistically by corporate managers to achieve their own interest or these of shareholders. The use of debts contracts may reduce such behavior. Debt holder's protection is largely guaranteed by securities and warranties mechanisms taken on the firm's assets in place. As a result, one can consider that debt holder's risk stems from two origins:

- (1) The importance of agency conflicts with the managers or the shareholders that can be mitigated by corporate governance system quality;
- (2) The quality of financial reporting, as long as the nature and the value of assets is taken in to consideration to appreciate the warranties of debt contract.

So, one could argue that the quality of corporate governance is likely to mitigate debt holder's risk and therefore the cost of debt capital.

The way that corporate funding is structured and financed is of interest to authorities because it will affect the resilience and decision-making of individual corporate and at the aggregate level could possibly affect the stability of the wider financial system. Corporate funding markets and corporate liability structures may be relevant for financial stability in a number of ways. Well-functioning debt and equity markets allow businesses to fund investment flexibly and at a relatively low cost to existing shareholders, thereby contributing to investment and growth.

However, high debt levels relative to equity in corporate balance sheets create leverage which can accentuate losses to owners, and create elevated debt service requirements. This in turn can lead to exacerbated cash flow stress, deteriorating creditworthiness, debt-rollover risks and higher corporate default rates. Moreover, in particular if credit risk is under-priced, spikes in default rates may permeate through the financial system as investors and creditors, including the banking system, incur losses. To the extent that there are high and pro-cyclical levels of corporate leverage that affect a significant number of companies, this may add to pro-cyclicality of the financial system, and hence reduce financial stability.

Objectives of the Study

The main objective of this study is to ascertain the effect of corporate governance on borrowing cost. The specific objectives include to:

1. Evaluate the effect of Board size on borrowing cost of brewery firms listed on Nigeria Stock Exchange.
2. Determine the effect of ownership concentration on borrowing cost of brewery firms listed on Nigeria Stock Exchange.
3. Ascertain the effect of Board independence on borrowing cost of brewery firms listed on Nigeria Stock Exchange.

Research Hypotheses

In line with the research objectives the following null hypotheses are formulated:

Ho1: Board size does not significantly affect borrowing cost of brewery firms listed on Nigeria Stock Exchange.

Ho2: Ownership concentration does not significantly affect borrowing cost of brewery firms listed on Nigeria Stock Exchange.

Ho3: Board independence does not significantly affect borrowing cost of brewery firms listed on Nigeria Stock Exchange.

CONCEPTUAL REVIEW

Corporate Governance

Corporate governance has been looked at and defined variedly by different scholars and practitioners. However they all have pointed to the same end, hence giving more of a consensus in the definition. For example, Coleman & Biekpe (2005) defined corporate governance as the relationship of the enterprise to shareholders or in the wider sense as the relationship of the enterprise to society as a whole. However, Mayer (1999) also offers a definition and contends that it means the sum of the processes, structures and information used for directing and overseeing the management of an organization. The Organization for Economic Corporation and Development (1999) on the other hand, has defined corporate governance as a system on the basis of which companies are directed and managed. Corporate governance involves a set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined (OECD 2004).

Similarly, Arun and Turner (2002) contend that there exist narrow approaches to corporate governance, which views the subject as the mechanism through which shareholders are assured that managers will act in their interests. However, Shleifer & Vishny (1997), Vives (2000) and Oman (2001) observed that there is a broader approach which views the subject as the methods by which suppliers of finance control managers in order to ensure that their capital cannot be mismanaged and that they earn a return on their investment. There is a consensus, however that the broader view of corporate governance should be adopted in the case of banking institutions because of the peculiar contractual form of banking which demands that corporate governance mechanisms for banks should encapsulate depositors as well as shareholders (Macey & O'Hara 2001).

Borrowing cost

Borrowing cost is the total charge for taking on a debt obligation that can involve interest payments and other financing fees. The borrowing cost for a business tends to go up when prevailing market interest rates are rising during times of economic expansion and increased inflation, even if its credit standing remains excellent.

It may be difficult to identify a direct relationship between particular borrowings and a qualifying asset and to determine the borrowings that could otherwise have been avoided. Such a difficulty occurs, for example, when the financing activity of an entity is co-ordinated centrally. Difficulties also arise when a group uses a range of debt instruments to borrow funds at varying rates of interest, and lends those funds on various bases to other entities in the group. Other complications arise through the use of loans denominated in or linked to foreign currencies, when the group operates in highly inflationary economies and from fluctuations in exchange rates. As a result, the determination of the amount of borrowing costs that are directly attributable to the acquisition of a qualifying asset is difficult and the exercise of judgment is required (AASB 123, 2015).

Board size and borrowing cost

The two most important functions of the board of directors are those of advising and monitoring (Raheja, 2005; Adams & Ferreira, 2007). The advisory function involves the provision of expert advice to the CEO and access to critical information and resources (Fama & Jensen, 1983 cited in Wintoki, 2009). This is performed by both insiders and outsiders, although Fama and Jensen (1983) cited in Wintoki (2009) note the importance of outside directors, who bring valuable expertise and potentially important connections. The advantage of larger board size is the greater collective information that the board subsequently possesses and hence larger boards will lead to higher performance (Dalton & Dalton, 1999; 2005). Secondly, the board has the responsibility to monitor, discipline, and remove ineffective management teams, to ensure that managers pursue the interests of shareholders. Raheja (2005) argues that insiders are an important source of firm-specific information for the board, but may have distorted objectives due to private benefits and lack of independence from the CEO. Compared to insiders, outsiders are more independent, providing better monitoring, but are less informed about the firm's activities.

Ownership Concentration and Borrowing Cost

Conceptually, concentrated ownership may improve performance by increasing monitoring and alleviating the free-rider problem in takeovers (Shleifer and Vishny, 1986 as cited in John 2004), but other mechanisms may work in the opposite direction. Most frequently discussed is the possibility that large shareholders exercise their control rights to create private benefits, sometimes expropriating smaller investors. Even the fear of expropriation may limit the ability of firms with high ownership concentration to raise fresh finance through borrowing or new share offerings.

Borrowing costs are interest and other costs incurred by an enterprise in connection with the borrowing of funds. Borrowing costs may include: interest on bank overdrafts and short-term and long-term borrowings; amortization of discounts or premiums relating to borrowings; amortization of ancillary costs incurred in connection with the arrangement of borrowings; finance charges in respect of finance leases, Leases; and exchange differences arising from foreign currency borrowings to the extent that they are regarded as an adjustment to interest costs (MASB 2001).

Board Independence and Borrowing Cost

Independent directors' roles need to be supported by the advice of internal and external experts, with the latter being the crucial points of contact. This is vital to achieve objective, appropriate and informed decision-making. Without management acknowledging the benefit of sharing the company's governance process and collaborating with the directors, hiring competent directors will not necessarily result in effective board performance or in value being added to the company (Dulewicz, & Herbert 2004). Board of directors consists of a composition of outside/independent directors and inside/ executive directors, discussions on board of directors are always centered on the advantages and disadvantages of outside directors. Thus, evidence on the beneficial role of inside directors is scarce.

Similar to outside directors, inside directors are also expected to play their role as a governance agent safeguarding between the firm and shareholders' interest and at the same time safeguarding the contractual relation between the firm and the board (Williamson, 1985 as cited on Roselina Shakir 2010). With regards to their monitoring role, inside directors are expected to provide first-hand information on the firm's operation to other board members (Boumosleh & Reeb, 2005). Since inside directors are active participants in the firm's overall decision making process, they have access to all pertinent information that facilitates the decision making on the firms' activities. This is in contrast to outside directors who does not hold any executive powers and who usually sit on the boards of other firms too.

THEORETICAL REVIEW

Agency Theory

The most recognised theoretical perspective applied in corporate governance studies is agency theory (Dalton, Daily, Ellstrand & Johnson 1998; Shleifer and Vishny, 1997 as cited in Roselina (2015) which originated from Berle and Means (1932) as cited on Roselina (2015). To be able to survive in this competitive business environment, small private firms grow beyond the financial capability of a single owner. Thus, "going public", as it is commonly referred to, is regarded as an efficient and cost-effective way to raise funds (which are interest-free) for the expansion of business operations. As a result, big modern corporations have multiple owners or shareholders. These owners are regarded as the principals when they enter into a contract with executives or managers to run the firm on their behalf. The executives appointed are morally obligated to work towards achieving maximum returns for the shareholders/principals. However, this delegation of power may provide opportunistic manager with the chance to expropriate shareholders' wealth by choosing to invest in projects that could benefit the manager rather than the shareholders.

Stewardship Theory

Stewardship theory is based on a model of man where a steward perceives greater utility in cooperative, pro-organizational behaviour than in self-serving behaviour; the theory assumes a strong relationship between organizational success and a principal's satisfaction. Hence, a steward overcomes the trade off by believing that working towards organizational, collective ends meet personal needs. Empowering governance mechanisms are appropriate for the model of man to which stewardship theorists adhere. Therefore, control lowers a steward's motivation and undermines pro organisational behaviour (Davis et al., 1997 as cited as Sinan 2008).

In contrast to agency theory, stewardship theory suggests that executives tend to be more motivated to act in the best interest of the corporation than in their own self-interest. Whereas agency theory focuses on extrinsic rewards that serve such lower-level needs as pay and security, stewardship theory focuses on the higher-order needs, such as achievement and self-actualization.

Stewardship theory argues that, over time, senior executives tend to view the corporation as an extension of themselves. Rather than the use of firm for their own ends, the executives are more interested in guaranteeing the continued life and success of the corporation. The relationship between the board and top management is thus one of principle and steward, not principle and agent (“hired hand”). Stewardship theory notes that in a widely held corporation, the shareholder is free to sell his/her stock at any time. A diversified investor may care little about risk at the company level, preferring that management assume extraordinary risk so long as the return is adequate. Because executives in a firm cannot easily leave their jobs when in difficulty, they are more interested in a merely satisfactory return and put heavy emphasis on the firm’s continued survival. Thus, stewardship theory would argue that in many instances, top management may care more about a company’s long-term success than do more short-term oriented shareholders (Monks & Minow, 2004).

METHODOLOGY

Research Design

This study is concerned with the effect of corporate governance on borrowing cost of brewery firms listed on Nigeria stock exchange from 2010-2015. The research design employed in this study is the ex-post facto research design. An Ex-post Facto research determines the cause-effect relationship among variables. Ex-post Facto seeks to find out the factors that are associated with certain occurrence, conditions, events or behaviours by analyzing past events or already existing data for possible casual factors Kothari and Garg (2014).

Population of the Study

The population of the study consists of the seven (7) brewery firms listed on the floor of the Nigerian Stock Exchange from 2010 to 31st December 2015. They include; Champion Breweries Plc, Golden Guinea Breweries Plc, Nigerian Breweries Plc, Guinness Nigeria Plc, International Breweries Plc, Jos International Breweries Plc, Premier Breweries Plc.

Sample Size and Sampling Method

The seven (7) listed brewery firms represent the sample size for this study. Data were gathered from the published financial statements of the seven (7) quoted firms for a six (6) year period spanning from 2010-2015, using purposive sampling method (that is all the brewery firms that filed their annual financial statements with NSE from 2010-2015 without missing any year was selected for this study).

Source of Data

This study made use of secondary data mainly. The data were sourced from publications of the Nigerian stock exchange (NSE), fact books and the annual report and accounts of the listed brewery firms, particularly the comprehensive income statement and statement of financial positions of these companies as well as their respective notes to the accounts. Both the dependent and independent variables were computed from the data extracted from publications of the Nigerian stock exchange (NSE), the annual report and accounts of the listed firms and ratios were computed from the figures as reported in the annual reports.

Research Variables

Independent Variables

The drivers for the independent variable (corporate governance) are Board size, ownership concentration and Board independence.

- **Board Size (BSIZE_{it}):** is the logarithm of the number of directors on the board for company *i* in time *t*.
- **Ownership Concentration (OWNCO_{it}):** share proportion of the largest shareholder for company *i* in time *t*.
OWNCO = the largest shareholder’s shares / total shares
- **Board Independence (BIND_{it}):** percentage of independent directors for company *i* in time *t*
BIND = number of the independent directors / number of the board of directors

Dependent Variable:

The dependent variable in this study is borrowing cost:

a) **Borrowing Cost (BCOST_{it})** = financial cost / total debt

Control Variables

The control variables used in this study are:

- a) CSZ: company size (book value of total assets)
- b) LEV: leverage (the ratio of debt to total assets (%))

Data analysis techniques.

This study employs ordinary least square using panel data between 2010 and 2015 covering period of 6 years for seven firms, to estimate and provide evidence on the nature of relationship between corporate governance and borrowing cost. Inferential statistics of the hypotheses were carried out with the aid of E-view 9.0 statistical software, using coefficient of correlation which is a good measure of relationship between two variables, tells us about the strength of relationship and the direction of relationship as well. Ordinary least Square Regression analysis was used for the study. Regression analysis predicts the value of a variable based on the value of the other variables and explains the impact or effect of changes in the values of the variables. Granger causality test was used to prove the causality or the direction of influence of one variable on other variables. Granger causality test was also used to establish the effect that Board independence, ownership concentration and Board independence has on borrowing cost.

Model Specification

The equations below show the regression model specification of independent variables against the dependent variable. Borrowing cost is a function of corporate governance drivers

$$Y = f(X) + \mu$$

$$\begin{aligned} \text{BCOST}_{it} &= \beta_0 + \beta_1 \text{BSIZE}_{it} + \text{CSZ}_{it} + \text{LEV}_{it} + \mu_{it} && - && - && - && \mathbf{Ho_1} \\ \text{BCOST}_{it} &= \beta_0 + \beta_1 \text{OWNCO}_{it} + \text{CSZ}_{it} + \text{LEV}_{it} + \mu_{it} && - && - && - && \mathbf{Ho_2} \\ \text{BCOST}_{it} &= \beta_0 + \beta_1 \text{BIND}_{it} + \text{CSZ}_{it} + \text{LEV}_{it} + \mu_{it} && - && - && - && \mathbf{Ho_3} \end{aligned}$$

Where:

$$\begin{aligned} \beta_0 &= \text{Constant term (intercept)} \\ \beta &= \text{Coefficient of Corporate governance} \\ \mu &= \text{Error term (Stochastic Term)} \end{aligned}$$

Table 1: Correlation Matrix of Variables in Brewery Sector

	BCOST	BDSIZE	OWNCO	BIND	CSZ	LEV
BCOST	1.0000	0.0096	0.3167	0.3630	-0.4320	0.7804
BDSIZE	0.0096	1.0000	0.1429	0.0850	-0.2966	0.5035
OWNCO	0.3167	0.1429	1.0000	-0.7987	0.3434	-0.3326
BIND	0.3630	0.0850	-0.7987	1.0000	-0.8003	0.4524
CSZ	-0.4320	-0.2966	0.3434	-0.8003	1.0000	-0.4335
LEV	0.7804	0.5035	-0.3326	0.4524	-0.4335	1.0000

Source: Researcher's computation using E-View 9.0, 2017

It is indicated in table 1 that BCOST has a positive relationship with the independent variables with the exception of CSZ.

TEST OF NULL HYPOTHESES

Test of Null Hypothesis 1

Ho1: Board size does not significantly affect borrowing cost of brewery firms listed on Nigeria Stock Exchange.

Model Specification:

$$\text{BCOST}_{it} = \beta_0 + \beta_1 \text{BSIZE}_{it} + \text{CSZ}_{it} + \text{LEV}_{it} + \mu_{it} \quad - \quad - \quad - \quad \mathbf{Ho_1}$$

TABLE 2: OLS Regression Analysis testing the association between BSIZE, CSZ, LEV and BCOST

Dependent Variable: BCOST

Method: Panel Least Squares

Date: 02/04/17 Time: 18:13

Sample: 2010 2015

Periods included: 6

Cross-sections included: 7

Total panel (balanced) observations: 42

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.291154	2.215087	-0.131441	0.0081
BSIZE	1.011112	0.079409	0.139929	0.0000
CSZ	-0.003949	0.206018	-0.019171	0.9848
LEV	0.230315	0.079631	2.892266	0.0063
R-squared	0.606198	Mean dependent var		0.688449
Adjusted R-squared	0.543529	S.D. dependent var		1.310721
S.E. of regression	1.213016	Akaike info criterion		3.314490
Sum squared resid	55.91350	Schwarz criterion		3.479982
Log likelihood	-65.60428	Hannan-Quinn criter.		3.375149
F-statistic	3.290292	Durbin-Watson stat		1.240730
Prob(F-statistic)	0.000832			

Source: Researcher's computation using E-View 9.0, 2017

Interpretation of Regressed Result

The regressed coefficient correlation result in table 2 shows that BCOST associates positively with BSIZE ($\beta_1=1.011112$) and LEV ($\beta_3=0.230315$) but relates negatively CSZ ($\beta_2=-0.003949$). The probability values of the slope coefficient show that $P(x_1=0.0000 < 0.05$; $x_2=0.9848 > 0.05$; $x_3=0.0063 < 0.05$). This implies that BCOST has a positive and statistically significant relationship with BSIZE and LEV at 5% significance level, but associates negatively and statistically insignificantly with CSZ. The coefficient of determination obtained is 0.54 (54%), which is commonly referred to as the adjusted R^2 . The cumulative test of hypothesis using adjusted R^2 to draw statistical inference about the explanatory variables employed in this regression equation, shows that 54% of the systematic variations in the dependent variable can be jointly predicted by all the independent variables. 46% was explained by unknown variables that were not included in the model. The value of the Durbin-Watson statistic is 1.240730, which is an indication of the non-existence of serial correlation in the model and that the test distribution is normal. The overall significance of the model (F-statistic=0.000832) is statistically significant at 5%.

Model Specification $BCOST = 0.291154 + 1.011112BSIZE$

The model shows that for there to be one unit increase in borrowing cost, there will be 1.011112 multiplying effect of BSIZE.

Decision Rule:

Accept the null hypothesis (H_0) if the p-value of the test is greater than 0.05, otherwise reject.

Decision:

The P-value of the test is 0.000832 which is less than 0.05. Hence, reject H_0 and Accept H_1 .

Conclusion:

Since the p-value of the test is less than 0.05, then there exists enough evidence to reject the null hypothesis and conclude that BSIZE has a statistically significant effect on BCOST of listed brewery firms in Nigeria at 5% significant level.

Table 3: Granger Causality Test

Pairwise Granger Causality Tests

Date: 02/04/17 Time: 18:17

Sample: 2010 2015

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
BSIZE does not Granger Cause BCOST	28	7.45686	0.0032
BCOST does not Granger Cause BSIZE		9.51603	0.0010

Source: Researcher's computation using E - View 9.0, 2017

Decision Rule:

If the F-value of the causality test is statistically significant at 5%, then causality is established. This implies that the Independent variable granger causes the dependent variable. Hence, H_1 is accepted, otherwise accept H_0 .

Interpretation of Post Regression Analysis

Table 3 shows that there is a bilateral causality between BSIZE and BCOST since the P-value (0.0032) is statistically significant at 5% level. Moreover, at two (2) lags there is a statistically significant relationship between BSIZE and BCOST. On the other hand, there is no reverse causation from BCOST to BSIZE. This reinforces the fact that BSIZE Granger Causes BCOST. Consequently, the null hypothesis is rejected for the alternative which states that BSIZE has a statistically significant effect on BCOST of brewery firms in Nigeria at 5% level of significance.

Test of Null Hypothesis II

Ho₂: Ownership concentration does not significantly affect borrowing cost of brewery firms listed on Nigeria Stock Exchange.

Model Specification

$$BCOST_{it} = \beta_0 + \beta_1 OWNCO_{it} + CSZ_{it} + LEV_{it} + \mu_{it} - - \mathbf{Ho}_2$$

TABLE 4: OLS Regression Analysis showing the association between OWNCO, CSZ, LEV and BCOST

Dependent Variable: BCOST

Method: Panel Least Squares

Date: 02/04/17 Time: 18:22

Sample: 2010 2015

Periods included: 6

Cross-sections included: 7

Total panel (balanced) observations: 42

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.667364	1.830758	-0.364529	0.7175
OWNCO	8.511286	3.963042	2.147665	0.0382
CSZ	0.036134	0.194306	0.185963	0.8535
LEV	0.207708	0.069599	2.984352	0.0049
R-squared	0.291756	Mean dependent var		0.688449
Adjusted R-squared	0.235842	S.D. dependent var		1.310721
S.E. of regression	1.145782	Akaike info criterion		3.200444
Sum squared resid	49.88700	Schwarz criterion		3.365936
Log likelihood	-63.20932	Hannan-Quinn criter.		3.261104
F-statistic	5.217943	Durbin-Watson stat		0.395906
Prob(F-statistic)	0.004079			

Source: Researcher's computation using E- View 9.0, 2017

Interpretation of Regressed Result

The regressed coefficient correlation result in table 4 shows that BCOST associates positively with OWNCO ($\beta_1=8.511286$); CSZ ($\beta_2=0.036134$) and LEV ($\beta_3=0.207708$). The probability values of the slope coefficient show that $P(x_1=0.0382 < 0.05; x_2=0.8535 > 0.05; x_3=0.0049 < 0.05)$. This implies that BCOST has a positive and statistically significant relationship with OWNCO and LEV at 5% significance level, but relates insignificantly with CSZ. The coefficient of determination obtained is 0.24 (24%), which is commonly referred to as the adjusted R^2 . The cumulative test of hypothesis using adjusted R^2 to draw statistical inference about the explanatory variables employed in this regression equation, shows that 24% of the systematic variations in the dependent variable can be jointly predicted by all the independent variables while 76% was explained by unknown variables that were not included in the model. The value of the Durbin-Watson statistic is 0.395906, which is an indication of the non-existence of serial correlation in the model. The overall significance of the model (F-statistic=0.004079) is statistically significant at 5%.

Model Specification

$$BCOST = -0.667364 + 8.511286OWNCO$$

The model shows that for there to be one unit increase in borrowing cost, there will be 8.511286 multiplying effect of OWNCO.

Decision Rule:

Accept the null hypothesis (H_0) if the p-value of the test is greater than 0.05, otherwise reject.

Decision:

The P-value of the test is 0.004079 which is less than 0.05. Hence, reject H_0 and Accept H_1 .

Conclusion:

Since the p-value of the test is less than 0.05, then there exists enough evidence to reject the null hypothesis and conclude that OWNCO has a statistically significant effect on BCOST of brewery firms in Nigeria at 5% level of significance.

Table 5: Granger Causality Test showing the Causality between BCOST and OWNCO

Pairwise Granger Causality Tests

Date: 02/04/17 Time: 18:23

Sample: 2010 2015

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
OWNCO does not Granger Cause BCOST	28	5.90500	0.0085
BCOST does not Granger Cause OWNCO		7.72594	0.0027

Source: Researcher's computation using E-View9.0, 2017

Decision Rule:

If the F-value of the causality test is statistically significant at 5%, then causality is established. This implies that the Independent variable granger causes the dependent variable. Hence, H_1 is accepted, otherwise accept H_0 .

Interpretation of Post Regression Analysis

Table 5 shows that there is a bidirectional causality between OWNCO and BCOST since the P-value (0.0085) is statistically significant at 5% level. Moreover, at two (2) lags there is a statistically significant relationship between OWNCO and BCOST. On the other hand, there is no reverse causation from BCOST to OWNCO. This reinforces the fact that OWNCO Granger Causes BCOST. Consequently, the null hypothesis is rejected for the alternative which states that OWNCO has a statistically significant effect on BCOST of brewery firms in Nigeria at 5% level of significance.

Test of Null Hypothesis III

H_{03} : Board independence does not significantly affect borrowing cost of brewery firms listed on Nigeria Stock Exchange.

Model Specification

$$BCOST_{it} = \beta_0 + \beta_1 BIND_{it} + CSZ_{it} + LEV_{it} + \mu_{it} \quad - - H_{03}$$

TABLE 6: OLS Regression Analysis showing the relationship between BIND, CSZ, LEV and BCOST

Dependent Variable: BCOST

Method: Panel Least Squares

Date: 02/04/17 Time: 18:26

Sample: 2010 2015

Periods included: 6

Cross-sections included: 7

Total panel (balanced) observations: 42

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.833865	1.294930	-0.643946	0.5235
BIND	1.341746	0.197506	6.793440	0.0000
CSZ	0.019321	0.137572	0.140443	0.8891
LEV	0.180502	0.049611	3.638351	0.0008
R-squared	0.641358	Mean dependent var		0.688449
Adjusted R-squared	0.613044	S.D. dependent var		1.310721
S.E. of regression	0.815344	Akaike info criterion		2.519980
Sum squared resid	25.26188	Schwarz criterion		2.685472
Log likelihood	-48.91958	Hannan-Quinn criter.		2.580640
F-statistic	22.65175	Durbin-Watson stat		1.509508
Prob(F-statistic)	0.000000			

Source: Researcher's computation using E-View 9.0, 2017

Interpretation of Regressed Result

The regressed coefficient correlation result in table 6 shows that BCOST associates positively with BIND ($\beta_1=1.341746$); CSZ ($\beta_2=0.019321$) and LEV ($\beta_3=0.180502$). The probability values of the slope coefficient show that $P(x_1=0.0000 < 0.05$; $x_2=0.8891 > 0.05$; $x_3=0.0008 < 0.05$). This implies that BCOST has a positive and statistically significant relationship with BIND and LEV at 5% significance level, but relates insignificantly with CSZ. The coefficient of determination obtained is 0.61 (61%), which is commonly referred to as the adjusted R^2 . The cumulative test of hypothesis using adjusted R^2 to draw statistical inference about the explanatory variables employed in this regression equation, shows that 61% of the systematic variations in the dependent variable can be jointly predicted by all the independent variables while 39% was

explained by unknown variables that were not included in the model. The value of the Durbin-Watson statistic is 1.509508, which is an indication of the non-existence of serial correlation in the model. The overall significance of the model (F-statistic=0.000000) is statistically significant at 5%.

Model Specification

$$BCOST = -0.833865 + 1.341746BIND$$

The model shows that for there to be one unit increase in borrowing cost, there will be 8.511286 multiplying effect of BIND.

Decision Rule:

Accept the null hypothesis (H_0) if the p-value of the test is greater than 0.05, otherwise reject.

Decision:

The P-value of the test is 0.000000 which is less than 0.05. Hence, reject H_0 and Accept H_1 .

Conclusion:

Since the p-value of the test is less than 0.05, then there exists enough

Table 7: Granger Causality Test showing the Causality between BCOST and BIND

Pairwise Granger Causality Tests

Date: 02/04/17 Time: 18:30

Sample: 2010 2015

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
BIND does not Granger Cause BCOST	28	45.1326	1.E-08
BCOST does not Granger Cause BIND		9.42982	0.0010

Source: Researcher's computation using E - View 9.0, 2017

Interpretation of Post Regression Analysis

Table 7 shows that there is a bilateral causality between BIND and BCOST, more so, the P -value (0.0000) is statistically significant at 5% level. Moreover, at two (2) lags there is a statistically significant relationship between BIND and BCOST. On the other hand, there is no reverse causation from BCOST to BIND. This establishes the fact that BIND Granger Causes BCOST. Consequently, the null hypothesis is rejected for the alternative which states that BIND has a statistically significant effect on BCOST of brewery firms in Nigeria at 5% level of significance.

FINDINGS, CONCLUSION AND RECOMMENDATIONS

Findings:

The findings of the study are as follows:

- 1) Table 2 shows that Prob (F-statistic) = 0.000832 < 0.05, which was confirmed by the Granger Causality test in table 3 with the F- Statistic being significant at 5%; Prob. value = 0.0032 < 0.05. It is therefore found that Board size has a positive and statistically significant effect on borrowing cost in listed brewery firms on Nigeria stock exchange at 5% level of significance.
- 2) Table 4 shows that Prob (F-statistic) = 0.004079 < 0.05, which was confirmed by the Granger Causality test in table 5 with the F- Statistic being significant at 5%; Prob. value = 0.0085 < 0.05. It is therefore found that ownership concentration has a positive and statistically significant effect on borrowing cost in listed brewery firms on Nigeria stock exchange at 5% level of significance.
- 3) Table 6 shows that Prob (F-statistic) = 0.000000 < 0.05, which was confirmed by the Granger Causality test in table 7, indicating that the F- Statistic is significant at 5%; Prob. value = 0.0000 < 0.05. It is therefore found that Board independence has a positive and statistically significant effect on borrowing cost in listed brewery firms on Nigeria stock exchange at 5% level of significance.

Conclusion

This study examines empirically the effect of corporate governance on cost of borrowing of listed brewery firms in Nigeria.

Using a pooled sample composed of the seven (7) listed brewery companies from 2010 to 2015, using ex post facto research to test whether cost of debt is correlated with surrogates of the corporate governance, which are; board size, ownership concentration and board independence. Empirical findings reveal that the three surrogates of corporate governance have a significant reducing effect on the cost of debt at 5% significant level.

Recommendations

1. There should be an increase in board independence since it significantly decreases a firm's cost of capital.
2. Management should embrace low level of managerial ownership since it significantly reduces cost of borrowing and increases firm's value.

3. There should be a smaller number of directors on the board since small board size significantly reduces a firm's cost of capital and significantly increases firm's valuation.

REFERENCES

- [1].Accounting Standard (AS) 16, Borrowing Costs, (1 January 1995) 229,
- [2].http://www.mca.gov.in/Ministry/notification/pdf/AS_16.pdf
- [3].Adams, R. B. and Ferreira, D. (2007) A theory of friendly boards, *Journal of Finance*, 62, 217-250.
- [4].Ahmadpoor, A., Kashani-Poor, M., Shojai, M.R., (2011). The effect of corporate governance and audit quality on the cost of debt financing (borrowing). *Journal of Accounting and Auditing Review*, 17(62), 32-17.
- [5].Arun, T. G., & Turner, J. D. (2002). Corporate governance of banks in developing. Advisory Group on Corporate Governance (AGCG) Report on Corporate Governance and International Standards, Reserve Bank of India.
- [6].Australian Accounting Standards Board AASB 123 (2015).
- [7].Bacha, S. (2014). Determinants of debt cost financing of Tunisian companies: Bivariate Analysis between 2000 and 2011.
- [8].Bae, K. H., & Goyal, V. K. (2010). Equity market liberalization and corporate governance. *Journal of Corporate Finance*, 16, 609-621.
- [9].Berle, A. & Means, G. (1932). *The Modern Corporation and private property* Macmillan, New York.
- [10]. Boumosleh, A. S., & Reeb, D. M. (2005). The governance role of corporate insiders. Available at SSRN: <http://ssrn.com/abstract=674082> downloaded on 7 April 2007.
- [11]. Business dictionary. <http://www.businessdictionary.com/definition/borrowing-cost.html>
- [12]. Chiang, Y. C., & Ko, C. L. (2009). An empirical study of equity agency costs and internationalization: Evidence from Taiwanese firms. *Research in International Business and Finance*, 23, 369-382.
- [13]. Coleman, A., & Nicholas- Biekpe, N. (2005). Does board and ceo matter for bank performance? A comparative analysis of banks in Ghana. *Journal of Business Management*, University of Stellenbosch Business School (USB), Cape Town, South Africa 13(46- 59).
- [14]. Dalton, D. and Dalton, C. R. (2005) Boards of directors: Utilizing empirical evidence in developing practical prescriptions, *British Journal of Management*, 16, S91-S97.
- [15]. Dalton, D. R., Daily, C. M., Ellstrand, A. E. & Johnson, J. L. (1998). Metaanalytic reviews of board composition, leadership structure, and financial performance', *Strategic Management Journal*, 19, (3), 269-290.
- [16]. Davis, J., Donaldson, L. and Schoorman, D. (1997). Toward a stewardship theory of management. *Academy of Management Review* 1997, 22(1), 20-47.
- [17]. Dulewicz, V & Herbert, P (2004). Does the composition and practice of boards of directors bear any relationship to the performance of their companies?', *Corporate Governance: An International Review*, 12(3), 263-280.
- [18]. Fama, E. and Jensen, M. C. (1983) Separation of ownership and control, *Journal of Law and Economics*, 26, 301-326.
- [19]. Haresh S., A. Subramanian and Krishnamurthy S. (2016); corporate governance and innovation: Theory and evidence.
- [20]. International Accounting Standard 23.
- [21]. Jinyu He, Joseph T. Mahoney and Heli C. Wang. (2016). Firm capability, corporate governance and competitive behaviour: A multi-theoretic framework.
- [22]. John S. Earle, Csaba Kucsera and Álmos Telegdy, (2004). Ownership concentration and corporate performance on the Budapest stock exchange: Do too many cooks spoil the goulash?*Upjohn Institute Staff Working Paper No. 03-93.
- [23]. Klapper, L. F., & Love, I. (2004). Corporate governance, investor protection, and performance in emerging markets. *Journal of Corporate Finance*, 10, 703-728.
- [24]. Kothari C.R., & Garg G. (2014). *Research methodology: Methods and techniques*. New Age International Limited, Publishers, New Delhi.
- [25]. Li, l., Dong, F., Liu, Y., Huang, H., & Wang, S. (2016). The effect of corporate governance on debt financing cost of listed companies. *J syst sci complex* (2016) 29: 772–788.
- [26]. Macey, J. R., & O'Hara, M. (2001). The corporate governance of banks. *Economic Policy Review*, 16, (2) 89- 102.
- [27]. MASB (2001); Lembaga Piawai Perakaunan Malaysia. *Malaysian Accountings Tandarbs Oard.Masb Standard 27*.
- [28]. Mayer, C. (1999). *Corporate Governance in the UK. A Paper Presented at The Conference on Corporate Governance in Asia: A Comparative Perspective*, OECD, and University of Oxford.
- [29]. Monks, R.A.G. and Minow, N. (2004). *Corporate Governance*. Third Edition, Blackwell Publishing.
- [30]. Morellec, E., N Schürhoff (2011). Corporate investment and financing under asymmetric information. *Journal of Financial Economics*, 99(2), February, 262–288.
- [31]. Nur, Yusuf, Saed, and Anuar (2011); *Effective Oversight Roles of Board of Directors – The Case of Listed Firms on Bursa Malaysia*.
- [32]. Piot, C. (2004). The existence and independence of audit committees in france, *Accounting and Business, Research*, 34(3), 223-246.
- [33]. Ponnu, C.H and R. M. Karthigeyan (2010); *Board independence and corporate performance: Evidence from Malaysia*.

- [34]. Raheja, C. G. (2005) Determinants of board size and composition: A theory of corporate boards, *Journal of Financial and Quantitative Analysis*, 40, 283-306.
- [35]. Rezaee, Z., (2002). *Financial Statement Fraud*. John Wiley & Sons.
- [36]. Roselina Shakir (2010); Board Size, Board Composition and Property Firm Performance.
- [37]. Sanjai Bhagat and Bernard Black (2010); Board Independence And Long-Term Firm Performance.
- [38]. Schöndube-Pirchegger, B., Schöndube, JR, (2011). Reputation concerns and herd behavior of audit committees—A corporate governance problem, *Journal of Accounting and Public Policy*, 30 (4), July–August, 327–347
- [39]. Sharbati, A., Aslani, A., & Barandagh, M.I. (2014). Corporate governance and the cost of debt financing (borrowing) at listed companies in Tehran stock exchange. *International Journal of Accounting Research*, 1(8), 2429.
- [40]. Shleifer, A., & Vishny R. W.(1997). A survey of corporate governance, *The Journal of Finance*, 52(2): 737–783.
- [41]. Shleifer, Andrei, and Robert W. Vishny (1986). Large Shareholders and Corporate Control. *Journal of Political Economy*, 94(3), 461-488.
- [42]. Sinan Düztas (2008); corporate governance: The effects of board characteristics, information technology maturity and transparency on company performance.
- [43]. *The European Journal of Finance*. (2009). The Impact of Board Size on Firm Performance: Evidence from the UK
- [44]. Tricker, A., (2009). *Essentials for Board Directors: An A–Z Guide*, Bloomberg Press, New York.
- [45]. Uwuigbe, Olubukunola Ranti and Fakile, Adeniran Samuel (2012). The effects of board size on financial performance of banks: A study of listed banks in Nigeria.
- [46]. Williamson, O. E. (1985). *The economic institutions of capitalism: Firms, markets, and relational contracting*, Macmillan, New York.
- [47]. Wintoki. (2009). The impact of board size on firm performance: Evidence from the UK. *The European Journal of Finance*, 15(4), June 2009, 385-404.