

Content available on Google Scholar

INNOVATIONS

[Homepage- www.journal-innovations.com](http://www.journal-innovations.com)

Effect of financial performance on the survival of quoted brewery industries in Nigeria

F. O. Olaoye and C.S. Afolabi

Department of Accounting,
Ekiti State University, Ado- Ekiti,
Ekiti State, Nigeria

Abstract

This study investigated the effect of financial performance on the survival of quoted Brewery industries in Nigeria. The period under review spans from 2008-2017. Data collected were analyzed using a random effect model and fixed effect model of panel data regression. The study revealed that when heterogeneity effect across firms and over time is incorporated into the model via the error term, both financial leverage and solvency exert a negative effect on the return on assets of the Brewery Industries in Nigeria, though the effect is only significant for financial leverage that stood at $-0.2061(p=0.000<0.05)$ as against the estimate of solvency that stood at $-0.0143(p=0.718>0.05)$. The study also revealed that liquidity exerts a positive and significant effect on the return on assets of the Brewery Industries in Nigeria to the tune of $0.6193(p=0.718>0.05)$. The study concluded that solvency exerts a negative effect on the return on assets of the Brewery Industries in Nigeria. This reflects that the solvency position of Brewery Industries in Nigeria negatively impacts the profitability level. The study, therefore, recommended that the survival of firms is associated with concern abilities to generate profit, increase the value of invested capital and repay its short and long-term liabilities. There is a dire need for prediction of survival status of a corporate entity from time-to-time since the results of corporate financial failure lead to loss of corporate existence. Thus, accurately predicting corporate survival status to time will help stakeholders (managers, shareholders, government, suppliers, employees and others) in making an informed decision.

Keywords: 1 Financial performance, 2 corporate survival, 3 liquidity, 4 return on assets, leverage

Introduction

Financial performance and corporate survival are two-way traffic functioning reciprocally. As corporate gains continuity in operational existence into a foreseeable future as a result of good management of financial resources. These financial resources are money available to a concern for spending in the form of cash, liquid securities and credit line. To remain and continue in operational existence, entities need to secure sufficient financial resources to be able to operate efficiently and sufficiently well to generate profit.

The management of key financial performance indicators such as the ratio of the current asset to current liabilities (current ratio), the ratio of the total asset to total liabilities (solvency ratio) and the relationship between total debt and total asset (leverage) among others will have a direct impact on the profitability of the concern which in turns will determine whether the organization will remain in operational existence or not. An organization cannot be making losses upon losses and still be expected to remain in operation.

Organizations while pursuing their objective of profit maximization should not allow their current liabilities to exceed their current assets as they may find it very difficult to meet their immediate financial obligation as they fall due which will, in turn, create liquidity problem for the organization and may likely threaten its survival Osundina (2014).

Maintaining a good system of financial performance will aid an organization to guide against liquidity, solvency and leverage problem among others and enhance profitability. An organization that has most of its assets financed by creditors (outsiders), keeping a very high debt profile (highly levered) will expend most of their profit on either debt financing or interest payment. Any organization with high debt profile is at the mercy of its creditors who can decide at any time to terminate the corporate existence of the organization.

This study was anchored on the fact that Solvency, Liquidity, and Leverage are metrics for financial performance and profitability for the survival of listed Brewery industries in Nigeria. This is because firms survive when they make a stable profit, meets up obligations as they fall due, is effective in debt, equity and dividends decisions and possesses the ability to utilize its assets efficiently with the vision of growing the market value of its shares as well as meeting stakeholders' interest.

Liquidity measures how quickly a company can meet its short-term financial obligations with the liquid assets available. Solvency, the company's ability and capability to meet its long-term financial obligation, Yadav (2014). For every firm strong liquidity position is very essential. Most often liquidity is measured with the help of three ratios i.e. (Current Ratio, Quick Ratio and Absolutely Liquidity Ratio). Liquid assets usually generate less profit than fixed profit, Vieira, (2010). The concept of liquidity is receiving grave attention day by day in terms of recent financial scenarios and the world economy, Sunday and Small (2012). The business managers and decision-makers have a great concern to develop a suitable plan to overcome the obligation and increase profitability. Firms need to ensure that they have sufficient funds to meet their short-term obligations. Liquidity is a technique to increase funds; if a firm is unable to meet its short-term obligations, the firm may face liquidity risk. Alternatively, effective liquidity measures could emerge a strong position of a company, Kumar and Yadav (2013). Leverage refers to the extent to which firms make use of their money borrowings (debts financing) to increase profitability and is measured by total liabilities to equity. Firms that borrow large sums of money during a business recession are more likely to default to pay off their debts as they mature; they will end up with high leverage and are more likely end up with a potential risk of bankruptcy. On the contrary, the lower the firm's borrowings, the lower the leverage, and the risk of bankruptcy will eventually be lower which signifies that business will continue operating. Solvency is the state or ability of a firm to stay financially afloat (that is, the state of being liquid) meeting every financial obligation as they fall due without hindrance and the need to borrow further.

The performance management is often measured by profitability which reflects managements' ability to earn optimum returns on assets at their disposal over a period. Profitability according to Owolabi and Obida (2012) is the ability of a business to make returns higher than the cost of financing their core operations to ensure the continued survival of the company. Often, listed companies in the Nigerian do found it difficult to make a profit; this does affect their performance which may be attributed to inadequate finance or where the finance is available at a cost too expensive Akintoye, (2016)

The problem of corporate survival, therefore, arises from bad or inadequate management of the various financial performance metrics (liquidity, solvency, leverage and so on) Dada and Ghazali, 2016. From the above, it is apparent that the exact effect of financial performance on corporate survival is yet to be established and it is calling for investigation within the Nigerian context. Most of the previous studies used data from two to three manufacturing industries in their studies. None has studied financial performance and corporate survival using five manufacturing industries in Nigeria with variables that relate to liquidity, solvency and leverage as a proxy for financial performance and profitability for corporate survival. These constitute the gaps to be filled by this study.

The growth opportunities embedded in the brewery industries in Nigeria has attracted global industry players such as SAB Miller, Carlsberg, and Castel are shifting attention to that sector of the Nigerian economy. This new development is expected to generate a positive development for the sector regarding volume growth and deeper market penetration (Lucas and Peter, 2018).

The primary objective of this study is to investigate the impact of financial performance on the survival of listed breweries industries in Nigeria, while the specific objectives are to: examine the trend and pattern of change in the return on assets (ROA) and liquidity, solvency and leverage of brewery industries in Nigeria.

Literature Review

In this section, attempts have been made to study the empirical studies relating to financial performance and corporate survival of business organizations.

Performance

The performance of firms is of vital importance for investors, stakeholders, and the economy at large. For investors, the return on their investments is highly valuable, and a well-performing business can bring high and long-term returns for their investors. Furthermore, the financial profitability of a firm will boost the income of its employees, bring better quality products for its customers, and have better environment-friendly production units. Also, more profits will mean more future investments, which will generate employment opportunities and enhance the income of people.

Corporate Performance has been viewed from various perspectives depending on the objectives and expectations of the users of the information generated. However, it is a relationship between input and output to be achieved. Richard et al. (2009), an organization's performance can be viewed from three major areas of outcomes; financial performance (usually measured by profit, return on assets, and return on investment. Product market performance (sales and market share); and shareholders' return (total shareholder return and economic value added). Nworji (2011) elucidates that corporate performance is an important concept that relates to the way and manner in which financial resources available to an organization are judiciously used to achieve the overall corporate objectives of an organization. It keeps the organization in business and creates a greater prospect for future opportunities

Financial Performance

This is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. It is the act of performing financial activity. This is also a general measure of a firm's overall financial health over a given period. Analysts and investors use financial performance to compare similar firms across the same industry or to compare industries or sectors in aggregate. In a broader sense, financial performance refers to the degree to which financial objectives being or has

been accomplished. It is the process of measuring the results of a firm's policies and operations in monetary terms.

Liquidity and Corporate Survival

Liquidity is significant to the successful functioning and survival of business organizations. A firm should ensure that it does not suffer from a lack of or excess liquidity to meet its short-term compulsions. A study of liquidity is of major importance to both the internal and the external analysts because of its close relationship with the day-to-day operations of a business (Bhunja, 2010). Business financing, especially at the wake of the global financial crisis, has become a major source of concern for business managers as bank loans are becoming too expensive to maintain as a result of tightening of both the local and international financial market and the reluctance of the public to invest in the share of companies sequel to the crash of the capital market. These situations compel business managers to device various strategies of managing internally generated revenue to enhance their chances of making a profit and meeting existing shareholders expectations. Liquidity management and profitability are very important in the development, survival, sustainability, growth, and performance. Profitability does not translate to liquidity in all cases. A company may be profitable without necessarily being liquid. Therefore, liquidity should be managed to obtain an optimal level, that is, a level that avoids excess liquidity which may translate to the poverty of ideas by management.

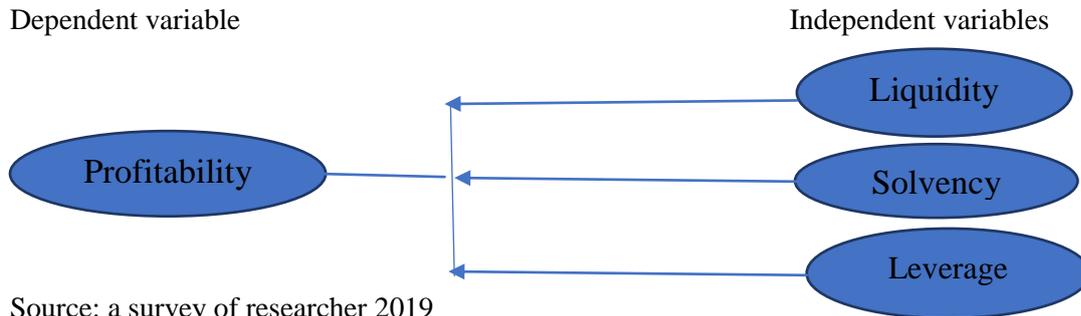
Solvency and Corporate Survival

Solvency is another word for liquidity and according to Bardia (2006), it is the lifeline of a business organization upon which its sustained growth depends. Solvency is the state or ability of a firm to stay financially afloat (that is, the state of being liquid) meeting every financial obligation as they fall due without hindrance and the need to borrow further. Insolvency is the other side of it. In other words, an organization, which is capable of maintaining the status of a "going concern", may be considered solvent. The outcome of continued insolvency or illiquidity is bankruptcy and this has been the case of a greater number of liquidations worldwide.

Leverage and corporate Performance

Leverage refers to the extent to which firms make use of their money borrowings (debts financing) to increase profitability and is measured by total liabilities to equity. Firms that borrow large sums of money during a business recession are more likely to default to pay off their debts as they mature; they will end up with high leverage and are more likely end up with a potential risk of bankruptcy. On the contrary, the lower the firm's borrowings, the lower the leverage, and the risk of bankruptcy will eventually be lower which signifies that business will continue operating.

Conceptual Framework Diagram



Source: a survey of researcher 2019

Theory

According to the Entropy Theory (Statement of Financial Statement Decomposition Measure Theory), a way to identify firms' financial distress could be a careful look at the changes occurring in their statements of financial position (Aziz and Dar, 2006). This theory employs the Univariate Analysis (UA) and Multiple Discriminant Analysis (MDA) in examining changes in the structure of balance sheets. Univariate analysis is the use of accounting-based ratios or market indicators for the distress risk assessment (Natalia, 2007). The financial ratios of each company, therefore, are compared once at a time and the distinction of those companies through a single ratio with a cut – off value is used to classify a company as either distressed or healthy (Monti and Moriano, 2010). MDA (or Multivariate Statistic or Multivariate analysis) is a statistical analysis in which more than one variable are analyzed at the same time (Slotemaker, 2008). MDA aims to eliminate the weakness of univariate analysis.

Review of Empirical Studies

Khan (2012) evaluated the relationship between capital structure decisions and financial performance adopting Pooled Ordinary Least Squares Regression. in a sample of thirty-six (36) engineering firms from Pakistan from the period of 2003 to 2009, The results revealed that financial leverage surrogated by short-term debt to the total asset (STDTA) and total debt to total assets (TDTA) have a significant and negative effect on ROA, GPM, and Tobin's Q as measures of financial performance.

Hsu (2013) investigated the moderating effect of leverage and ownership structure on firm performance using three hundred and thirty-six (336) information and technology firms in Taiwan for the period spanning 2006 to 2009. Utilizing descriptive statistics, correlation, and multiple regression techniques, the study revealed that the ratio of total debt to the total asset harms the association between research and development and performance.

Gweyi and Karanja (2014) assessed the effect of financial leverage on the financial performance of forty (40) deposit-taking savings and credit co-operative in Kenya using the period 2000- 2012. The objective of the study was to investigate the effect of financial leverage on financial performance. Secondary data were used for data analysis, obtained from the financial statement of the sampled firms and used descriptive statistics and correlation technique for data analysis. The results revealed the existence of a perfect positive correlation between the debt-equity ratio and return on equity (ROE) and profit after tax (PAT) at 99% confidence interval and a weak positive relationship between debt to equity ratio with return on assets (ROA) and income growth. The study concluded that there is

a strong relationship between financial leverage and financial performance of Saccos in Kenya. The study recommended future researchers to extend the period and include all the deposit-taking SACCOs and non-deposit taking SACCOs to check the relationship between financial leverage and financial performance.

Umar, Tanveer, Aslam and Sajid. (2012), examines the impact of capital structure on firms' financial performance in Pakistan of top 100 consecutive companies in Karachi Stock Exchange from 2006 to 2009. The study used exponential generalized least square regression to test the relationship between capital structure and firms' financial performance. The study revealed the three variables; capital structure, Current Liabilities to Total Asset, Long Term Liabilities to Total Asset, Total Liabilities to Total Assets, negatively impacts the Earnings before Interest and Taxes, Return on Assets (ROA), Earning per Share (EPS) and Net Profit Margin (NPM). whereas Price Earnings ratio (PER) shows a negative relationship with Current Liabilities to Total Asset and positive relationship is found with Long Term Liabilities to Total Asset where the relationship is insignificant with, Total Liabilities to Total Assets. The results also indicate that Return on Equity has an insignificant impact on Current Liabilities to Total Asset and Total Liabilities to Total Assets but a positive relationship exists with Long Term Liabilities to Total Asset. These results, in general, lead to the conclusion that capital structure choice is an important determinant of the financial performance of firms. This is the first study in Pakistan examining the relationship between firms' performance and capital structure of top 100 consecutive companies in Karachi Stock Exchange for four years.

Ikechukwu and Nnagbogu (2014) studied the effect of financial leverage on the financial performance of three (3) quoted pharmaceutical firms in Nigeria for 2001- 2012. The objective of the study was to determine the effect of financial leverage on the financial performance of the Nigeria pharmaceutical companies. The employed three (3) financial leverage for the independent variables such as debt ratio (DR); debt-equity ratio (DER) and interest coverage ratio (ICR) in determining their effect on financial performance for Return on Assets (ROA) as the dependent variable. The study used ex-post facto research design and made use of secondary data, obtained from the financial statement of the selected pharmaceutical companies quoted on the Nigerian Stock Exchange (NSE). Descriptive statistics, Pearson correlation and regressions were employed and used. The results of the analysis showed that debt ratio (DR) and debt-equity ratio (DER) have a negative relationship with Return on Assets (ROA) while interest coverage ratio (ICR) has a positive relationship with Return on Assets (ROA) in Nigeria pharmaceutical industry. The study revealed that all the independent variables have no significant effect on the financial performance of the sampled companies. The results suggested also that only 16.4% of the variations on the dependent variable are caused by the independent variables in our model suggesting that 83.6% of the variations in financial performance are caused by other factors outside our model. Based on the above findings, the researchers now recommend that companies' management should ensure that financial decisions made by them align with the shareholders' wealth maximization objectives which encompass the profit maximization objective of the firm. The amount of debt finance in the financial mix of the firm should be at the optimal level to ensure adequate utilisation of the firms' assets. The management should also monitor the interest charged on debt financing to avoid liquidation of the company

Javed, Rao, Akram and Nasir (2015) examined the effect of financial leverage on the performance of one hundred and fifty-four (154) textile companies in Pakistan from 2006 to 2011. The objectives of the study were to find the effect of financial leverage on the efficiency of firms in Pakistan using secondary data obtained from the financial statements of published Textile firms, quoted in Pakistan stock exchange. The study used Ordinary Least Squares (OLS) Regression. They revealed that financial leverage has a negative relationship with the efficiency of firms in Pakistan and concluded that with regression results, the return on assets and return on equity, are negatively related to total debt and long-term debt. The study recommends a reduction in the cost of capital as a measure for the better performance of textile firms in Pakistan.

Kuria and Omboi (2015) investigated the relationship between capital structure and financial performance of listed firms from the investment and banking sector of Kenya during the period 2009 to 2013. The authors adopted descriptive and regression analysis techniques and found debt to equity ratio to have a significant positive relationship with ROE among others.

Yahaya and Andow (2015) analyzed the effects of capital structure on the financial performance of six (6) quoted conglomerate firms in Nigeria for 2009- 2013, and reported no significant association between financial leverage measures (debt-equity ratio, debt to total asset ratio and long term debt to total asset) and return on asset (ROA). Innocent

Kakanda, Bello and Abba (2016) studied seven quoted firms from the consumer goods sector of Nigeria between 2008- 2013, descriptive statistics, correlation, and hierarchical multiple regression, the study showed a significant positive association between long-term debt (LTD) and ROE. However, the authors did not find evidence in support of any significant relationship between short-term debt (STD) and return on equity (ROE).

Enakirerhi and Chijuka (2016) researched on the determinants of capital structure of United Kingdom (UK) Financial Times Security Exchange (FTSE) of 100 firms using Fixed Effects Model and the study concludes that there is a significant relationship between long term debt, short term debt, total debt, and ROA.

Hossain and Nguyen (2016) examined the relationship between financial leverage and performance of ten (10) US companies for ten years from 2004 to 2013 using regression analysis. Their study reviewed a strong negative relationship between financial leverage and performance.

Abubakar (2016) In another study of the Health Care Sector of Nigeria utilizing the period between 2005- 2014, discovered that STDR and LTDR have a significant positive effect on ROE, while TDR and TDER have a significant negative effect on the ROE, using FEM.

Cyril (2016) in a study of six quoted conglomerate firms in Nigeria from 2011 to 2015, unraveled that LTDTA and STDTA have a significant negative effect on ROA, while TD/TA does not affect ROA.

Abata, Migiro, Akande and Layton (2017) discovered that total debt to total equity and total debt to total assets are negatively related to Tobin's and ROA, while long-term debt to total assets is positively related to Tobin's and ROA. The authors also reported that total debt to total equity and long-term debt to total assets are negatively linked to ROE.

Abubakar and Garba (2017) examined the effect of financial leverage on the financial performance their findings revealed that STDR, LTDR, and TDER have a negative and significant effect on the financial performance proxy by return on equity (ROE). Abubakar (2017b) analyzed the effect of financial leverage on the financial performance of eleven (11) quoted industrial goods firms in Nigeria, using the period 2005- 2016. The results of the Fixed Effects Model, the best panel estimator indicated that STDR and total-debt ratio (TDR) have no significant effect on the ROE, while TDER has a significant negative effect on the financial performance represented by ROE.

Ashraf, Ahmad and Mehmood (2017) examined the impact of financial leverage on the performance of ten (10) listed companies from the fuel and energy sector of Pakistan and found among others that debt-equity ratio has a significant negative impact on ROA, ROE and return on capital employed (ROCE) using multiple regression techniques. In another study of Pakistani firms,

Nazir (2017) measured the impact of financial leverage on the financial performance of twenty-one (21) listed companies in the textile, automobile, sugar, petroleum and energy sectors of Pakistan using ordinary least squares and correlation techniques during the period 2012- 2015. The study unravelled that financial leverage measured by debt to asset ratio has a significant negative effect on financial performance proxy by ROA.

Ahmed, Sani, Ezienyiand Lukman (2017) studied the impact of capital structure on firm value from 2007 to 2016, using Dangote Cement Plc as the area of study and Ordinary Least Squares as a method of analysis. The authors found a significant positive connection between debt and firm value.

Akingunola, Olawale, and Olaniyan (2017) evaluated the effect of capital structure decisions on the performance of 22 listed non-financial firms in Nigeria spanning 2011 to 2015. The results revealed that short term debt to the total asset (STDTA) and total debt to total equity (TD/TE) have a significant negative effect on performance indicated by ROA, while STDTA and long-term debt to the total asset (LTDTA) have a significant positive effect on the ROE. The authors also found total debt to total assets (TD/TA) to be significantly positively associated with ROE.

Akinleye and Olanrewaju (2018), study corporate governance and performance of selected Nigerian multinational firms from 2012 to 2016. the objective of their study to access the effect of board size, activism and committee activism on return on asset and firm growth rate. Secondary data collected from the published financial statement of four multinational firms were analyzed with static panel estimation techniques. The study revealed that board size and board activism exerted a significant negative impact on return on asset, committee activism exerted insignificant impact. Board size and board activism exert an insignificant negative impact on the firm's growth rate. Committee activism insignificantly spurs firm's growth rate. Their study concluded that corporate governance has a significant negative impact on return on asset, but has insignificant influence on the growth rate of Nigerian multinational firms. they recommended that corporate governance dynamics in firms world over should be reconsidered, such that it gives credence to more than just numbers of persons or meetings held, but the main reasons and deliberations in such meetings. It was also recommended that an excessive increase in magnitude or frequency of meetings held by the board of directors cum committee should be avoided.

Abubakar et al. (2018) evaluated the effect of financial leverage on the financial performance of five (5) quoted conglomerate firms in Nigeria from 2005 to 2016, using Fixed Effect Model (FEM). The findings revealed that short-term debt ratio (STDR) has a positive effect on the financial performance, while long-term debt ratio (LTDR) and total debt-equity ratio (TDER) have a significant negative effect on the financial performance, measured by the return on asset (ROA).

Methodology

Expo-facto research design was adopted because the research is analytical and it is based on secondary data and acquired requisite accounting information from published financial statement of industries under study, journals, articles, etc. The study covered the entire quoted brewery industries in Nigeria, out of which, 4 breweries namely Nigerian Breweries, Champion Breweries Nigeria, International Breweries, and Guinness Nig. Plc. are quoted in Nigeria and 2 non-Nigerian quoted breweries with subsidiaries in Nigeria Heineken N. V. were randomly selected. Firms quoted at Security Exchange were preferred due to the availability and reliability of the financial statements in that they are subject to mandatory audits. Secondary data used for this study were gathered from the financial reports of the sampled industries on the outcome variable, proxies by Return on Assets (ROA) and the predictor variables that were restricted to financial leverage, liquidity and solvency based on the gap creation for 10 years, spanning from 2008 to 2017. A proper definition of the variables is presented in table 2. Comparatively, the study used a random effect model and fixed effect model of panel data regression.

The fixed effect follows the form presented below:

$$Y_{it} = a_0 + \beta_1 X_{it} + \delta_i + \mu_{it}$$

δ_i is a time-varying intercept that captures all the variables that affect Y_{it} that vary over time but are constant cross-sectionally. In substituting the variables under consideration into the fixed effect model, it will appear thus:

$$ROA_{it} = a_0 + \beta_1 LEV_{it} + \beta_2 LIQ_{it} + \beta_3 SOL_{it} + \delta_i + \mu_{it}$$

Where:

Where ROA is Return on Assets, LIV is Leverage, LIQ is Liquidity and SOL is Solvency.

The random effect model follows the forms presented below:

$$Y_{it} = a_0 + \beta_1 X_{it} + W_{it}, W_{it} = \xi_{it} + \mu_{it}$$

Where ξ_{it} measures the random deviation from the global intercept a , subscript "it" represents the combination of time and individuality. U_{it} means error term. In substituting the variables under consideration into the fixed effect model, it will appear thus:

$$ROA_{it} = a_0 + \beta_1 LEV_{it} + \beta_2 LIQ_{it} + \beta_3 SOL_{it} + \xi_{it} + \mu_{it}$$

The selection of the best-suited model from the two is done following the Hausman test

Results and Discussion

Table 1: Descriptive Statistics

	ROA	LEV	LIQ	SOL
Mean	0.2220	0.5596	0.1434	0.4134
Std. Dev.	0.1837	0.4016	0.2057	0.5793
Minimum	-0.7455	0.2057	0.1450	-0.1700
Maximum	0.9700	0.5793	0.9710	0.2980

Source: STATA 13 Outputs based on study data.

Where ROA is Return on Assets, LIV is Leverage, LIQ is Liquidity and SOL is Solvency

Table 1 revealed that Return on Assets (ROA) has a mean of 0.2220, a standard deviation of 0.1837, minimum value of -0.7455 and maximum value of 0.9700. The implication is that the average return on assets of the Brewery Industries in Nigeria is 0.220 with a low deviation of 0.1837. In the same vein, it indicates that for every one naira invested, the industry made a loss of 0.7455 and a maximum gain of 0.9700. With leverage (LIV), 0.5596 mean score relates that firms' total debt is used more to finance the business than the firm asset. It further shows a standard deviation of 0.4016 which indicates a high deviation from the mean. Similarly, leverage has a minimum value of 0.2057 and a maximum value of 0.5793. This explains that some firms use a high level of debt (highly levered) to operate and run their activities and some others use very minimal level of debt and or consider low debt in financing their activities.

Consequently, the mean score for liquidity reported to be 0.1434 explains that the Brewing industries can meet their short-term obligations up to 1.4 times. The statistics further reveal a standard deviation of 0.2057 which was observed to be moderate. The result also shows that liquidity ratio has

a minimum value and maximum value of 0.1450 and 0.9710 respectively. For solvency of the Brewery Industries, the average score along with the standard deviation were 0.4134 and 0.5793 respectively. Also, the minimum and maximum values reported were -0.1700 and 0.2980 respectively.

Table 2: Correlation Matrix

Variables	ROA	LEV	LIG	SOL
ROA	1			
LEV	-0.0749	1		
LIQ	0.4325	0.5605	1	
SOL	-0.0425	0.2873	0.1908	1

Source: STATA 13 Outputs based on study data.

Where ROA is Return on Assets, LIV is Leverage, LIQ is Liquidity and SOL is Solvency

The result presented in Table 2 showed that negative relationship between return on assets, financial leverage and solvency with specific values of -0.0749 for return on assets and financial leverage and 0.0425 for return on assets and solvency. This implies that the return on assets moves in the opposite direction with financial leverage and solvency. As reported, the relation between return on assets and liquidity was a positive one to the tune of 0.4325. This implies that both variables move towards the same direction reflecting that increase in the liquidity level cause increase in the return on assets. While the relationship between financial leverage and liquidity and solvency were positive to the tune of 0.5605 and 2873 for liquidity and solvency respectively, the relationship between liquidity and solvency was equally with a correlation coefficient of 0.1908. This implication is that an increase in the financial leverage level amounts to increase of liquidity and solvency of the Brewery Industries.

Table 3: Pooled Effect Model

Dependent Variable: ROA

Variable	Coefficient	Std Error	t-statistics	Prob.
C	0.2527	0.0384	6.57	0.000
LEV	-0.206193	0.068078	-3.03	0.004
LIQ	0.6193543	0.1296369	4.78	0.000
SOL	-0.0143	0.0384	0.36	0.719

Source: STATA 13 Outputs based on study data.

Where ROA is Return on Assets, LEV is Leverage, LIQ is Liquidity and SOL is Solvency

R-Squared=0.03357

Adjusted R-Squared = 0.2924

F-statistics= 7.75

Prob. (F-statistics) = 0.0003

Table 3 revealed the pooled OLS estimation. The result shows that financial leverage exerts a negative significant effect on the return on assets of the Brewery Industries in Nigeria to the tune of -0.2061 ($p=0.004<0.05$). Consequently, the result showed that liquidity has a positive effect on the

return on assets of the Brewery Industries to the tune of 0.6193 ($p=0.004<0.05$). In the same vein, solvency exerts a negative and insignificant effect on the return on assets of the Brewery Industries in Nigeria to the tune of -0.0143 ($p=0.719<0.05$). Adjusted R-square reported to be 0.292 reflects that all the predictor variables (financial leverage, liquidity and solvency) accounted for 29.2% of the change in return on assets, while the remaining 70.8% could be accounted for by other variables not covered by this study. The F-statistics of 7.75 along the probability value of 0.0003 revealed that the model is fit.

Table 4: Fixed Effect Model

Dependent Variable: ROA

Variable	Coefficient	Std Error	t-statistics	Prob.
C	0.1749	0.0506	3.45	0.000
LEV	-0.1218	0.770	-1.58	0.121
LIQ	0.8605	0.1556	5.53	0.000
SOL	-0.0250	0.0419	0.62	0.541

Source: STATA 13 Outputs based on study data.

Where ROA is Return on Assets, LEV is Leverage, LIQ is Liquidity and SOL is Solvency

R-Squared=0.2764

F-statistics=10.47; Prob(F-statistics) = 0.0000

Result of fixed effect estimation presented in table 4 showed that when heterogeneity effect over time is incorporated into the model as intercept term, both financial leverage and solvency exert a negative and insignificant effect on the return on assets of the Brewery Industries in Nigeria to the tune of -0.1218($0.121=0.0>0.05$) for financial leverage and -0.0250($p=0.541>0.0$) for solvency. It was equally reported that liquidity has a positive and significant effect on the return on assets of Brewery Industries in Nigeria with the coefficient estimate and p-value of 0.8605 and 0.000 respectively. Adjusted R-square reported to be 0.2764 reflects that all the predictor variables (financial leverage, liquidity and solvency) accounted for 27.6% of the change in return on assets, while the remaining 66.2% could be accounted for by other variables not covered by this study. The F-statistics of 10.47 along the probability value of 0.0000 revealed that the model is fit.

Dependent Variable: ROA

Variable	Coefficient	Std Error	Z-test	Prob.
C	0.2527	0.0384	6.57	0.000
LEV	-0.2061	0.0680	3.03	0.002
LIQ	0.6193	0.1296	4.78	0.000
SOL	-0.0143	0.0398	0.36	0.718

Source: STATA 13 Outputs based on study data.

Where ROA is Return on Assets, LEV is Leverage, LIQ is Liquidity and SOL is Solvency

R-Squared=0.3347

Wald Chi2(3) = 23.25

Prob >Chi2 = 0.0000

Random effect estimation result presented above revealed that when heterogeneity effect across firms and over time is incorporated into the model via the error term, both financial leverage and solvency exert a negative effect on the return on assets of the Brewery Industries in Nigeria, though the effect is only significant for financial leverage that stood at $-0.2061(p=0.000<0.05)$ as against the estimate of solvency that stood at $-0.0143(p=0.718>0.05)$. The result also revealed that liquidity exerts a positive and significant effect on the return on assets of the Brewery Industries in Nigeria to the tune of $0.6193(p=0.718>0.05)$. Adjusted R-square reported to be 0.3347 reflects that all the predictor variables (financial leverage, liquidity and solvency) accounted for 33.5% of the change in return on assets, while the remaining 66.5% could be accounted for by other variables not covered by this study. The Wald Chi of 23.25 along the probability value of 0.0000 revealed that the model is fit.

Table 5: Hausman Test

Null hypothesis	Chi-square stat	Probability
The difference in coefficient not systematic	9.46	0.0623

Source: STATA 13 Outputs based on study data.

Table 5 reported a chi-square statistic of 9.46 along with its probability value of 0.0023. The result revealed that there is not enough evidence to reject the null hypothesis that differences in coefficients of fixed effect estimation and random effect estimation are not significant. Therefore, the most consistent and efficient estimation is given by the random effect estimation. It thus becomes evident that the estimation that best explains financial performance and corporate survival of quoted Brewing industries in Nigeria is the fixed effect estimation presented in table 4

4.2 Discussion Findings

An attempt has been made to explain financial performance and corporate survival of quoted Brewing industries in Nigeria. Through the analysis carried out and explained based on the random effect estimation, it was discovered that financial leverage hurts the return on assets of the Brewery Industries in Nigeria. This discovery was in tune with the a-priori expectation. The inference is that excessive leverage can negatively impact the profitability of Brewery Industries in Nigeria. this finding gave credence to the submission of Khan (2012), Ikechukwu and Nnagbogu (2014), Javed, Rao, Akram and Nasir (2015), that financial leverage has a negative relationship with firms' profitability.

Another major discovery made was that liquidity exerts a positive and significant effect on the return on assets of the Brewery Industries in Nigeria. This outcome corroborates the a-priori expectation and it reveals that Brewery Industries in Nigeria are in a stable position to meet their short-term liability. Their ability to pay their creditors as and when due and avoid stock out stimulated to increase in the profit level. this discovery was not in tandem with the findings of Anastasia, Michael and Grace (2014), that liquidity positioning had a negative and significant relationship with industries profitability. It was equally discovered that solvency exerts a negative effect on the return on assets of the Brewery Industries in Nigeria. This reflects that the solvency position of Brewery Industries in Nigeria harms the profitability level.

Conclusion and Recommendations

An attempt has been made to explain financial performance and corporate survival of quoted Brewing industries in Nigeria. Through the analysis carried out and explained based on the random effect estimation, it was discovered that financial leverage has a negative effect on the return on assets of the brewery industries in Nigeria. This discovery was in tune with the a-priori expectation. The inference is that excessive leverage can negatively impact the profitability of Brewery Industries in Nigeria. this finding gave credence to the submission of Khan (2012), Ikechukwu and Nnagbogu (2014), Javed, Rao, Akram and Nasir (2015), that financial leverage has a negative relationship with firms' profitability.

Another major discovery made was that liquidity exerts a positive and significant effect on the return on assets of the Brewery Industries in Nigeria. This outcome corroborates the a-priori expectation and it reveals that Brewery Industries in Nigeria are in a stable position to meet their short-term liability. Their ability to pay their creditors as and when due and avoid stock out stimulated to increase in the profit level. this discovery was not in tandem with the findings of Anastasia, Michael and Grace (2014), that liquidity positioning had a negative and significant relationship with industries profitability. The study concluded that solvency exerts a negative effect on the return on assets of the Brewery Industries in Nigeria. This reflects that the solvency position of Brewery Industries in Nigeria negatively impacts the profitability level. The study, therefore, recommended that the survival of firms is associated with concern abilities to generate profit, increase the value of invested capital and repay its short and long-term liabilities. There is a dire need for prediction of survival status of a corporate entity from time-to-time since the results of corporate financial failure lead to loss of corporate existence. Thus, accurately predicting corporate survival status to time will help stakeholders (managers, shareholders, government, suppliers, employees and others) in making an informed decision. The prediction of corporate survival is important for taking timely corrective and remedial measure for protecting the business firm from losing its survival status. The prediction of survival status probably is one of the most important business decisions making and proper utilization of financial resources of the firm.

REFERENCES

- Abata, M. A., Migiyo, S. O., Akande, J. O., & Layton, R. (2017). Does capital structure impact on the performance of South African listed firms? *Acta University Danubius Economica*, 13 (16), 335- 350.
- Abubakar, A. (2016). Financial leverage and financial performance: Evidence from the health care sector of the Nigerian stock exchange from 2005- 2014. *ADSU Journal of Economics and Interrelated Disciplines*, 1 (2), 45- 64.
- Abubakar, A., & Garba, A. (2017). Financial leverage and financial performance of quoted services firms in Nigeria. *Nigerian Journal of Management Technology and Development*, 8 (2), 273- 282.
- Abubakar, A., Maishanu, M. M., Abubakar, M. Y., & Aliero, H. M. (2018). Financial leverage and financial performance of quoted conglomerate firms in Nigeria. *Sokoto Journal Management Studies*, 14 (1), 85- 100.
- Ahmed, A., Sani, M., Ezienyi, B. J., & Lukman, R. (2017). Impact of capital structure on firm value: A case study of Dangote cement Plc. *Nigerian Journal of Management Technology and Development*, 8 (2), 290- 298.

Akingunola, R. O., Olawale, L. S., & Olaniyan, J. D. (2017). Capital structure decision and firm performance: Evidence from non-financial firms in Nigeria. *Acta Universitatis Danubius Economica*, 13 (16), 351- 364.

Akintoye IR (2016). *Investment Decisions in the 21st Century*. Unique Educational Publishers, Lagos, Nigeria

Ashraf, M., Ahmad, M. W., & Mehmood, N. (2017). The impact of financial leverage on firm performance in the fuel and energy sector, Pakistan. *Journal of Energy Technologies and Policies*, 7 (5), 43- 49.

Aziz, M. & Dar, H. (2006). Predicting Corporate Financial Distress: Whither Do We Stand? *Corporate governance*, 6(1), 18-33.

Bardia, S. C. (2006), "Liquidity Management: A Case Study of TISCO", *Towards Better Working Capital Management*, Murthy, G. K. eds., Hyderabad, India: The Icfai University Press

Cyril, U. M. (2016). The effect of capital structure on the financial performance of Nigerian quoted conglomerates. *European Journal of Accounting, Auditing and Finance Research*, 4 (6), 61- 69.

Dada A. O, Ghazali ZB (2016). The impact of capital on firm performance: Empirical Evidence from Nigeria. *J Econ Financ* 7: 23-30.

Enakirerhi, L. I., & Chijuka, M. I. (2016). The determinants of the capital structure of FTSE 100 firms in the UK: A fixed-effects panel data approach. *Research Journal of Finance and Accounting*, 7 (13), 59- 73.

Gideon Tayo Akinleye, Odunayo Magret Olarewaju & Bamikole Samson Fajuyagbe, (2019). Corporate governance and financial performance: an empirical analysis of selected multinational firms in Nigeria. *Problems and Perspectives in Management*, 17(1), 11-18. DOI:10.21511/ppm.17(1).2019.02.

Hossain, A., & Nguyen, X. (2016). Capital structure and U.S financial crisis: A survey of oil and gas industry. *Proceedings of the Academy Finance*. Pp. 1- 14.

Hsu, H. (2013). The moderating effects of leverage and ownership structure on firm performance. *South-East Asian Journal of Contemporary Business, Economics and Law*, 2 (1), 73- 76.

Javed, Z. H., Rao, H., Akram, B., & Nazir, M. F. (2015). Effect of financial leverage on the performance of the firms: Empirical evidence from Pakistan. *SPOUDAI Journal of Economics and Business*, 65 (1- 2), 87-95.

Kakanda, M. M., Bello, A. B. and Abba, M. (2016). Effect of capital structure on the performance of listed consumer goods companies in Nigeria. *Research Journal of Finance and Accounting*, 7 (8), 211- 219.

Khan, A.G. (2012), "The relationship of capital structure decisions with firm performance: A study of the engineering sector of Pakistan", *International Journal of Accounting and Financial Reporting*, Vol. 2, No. 1, pp.245 – 262

Kumar. M &Yadav.G.C (2013), *Liquidity Risk Management in Bank: A Conceptual Framework*, *AIMA Journal of Management and Research*, Volume 7, Issue 2/4.

Kuria, J., & Omboi, B. (2015). Relationship between the capital structure and the financial performance of investment and banking firms listed at Nairobi securities exchange Kenya. *Prime Journal of Business Administration and Management (BAM)*, 5 (11), 1983- 1991.

- Monti, E.N. and Moriano, G, R. (2010). A Statistical Analysis to Predict Financial Distress. *Journal Service and Management*, 45(2), 20-25.
- Natalia, O. (2007). *Corporate Financial Distress: An Empirical Analysis of Distress Risk* (Doctoral Dissertation No. 3430, University of St. Gallen, St. Gallen, Switzerland).
- Nazir, U. (2017). Impact of capital structure on the firm's financial performance: Textile, automobile, sugar, petroleum and engineering industry of Pakistan. *European Journal of Business and Management*, 9 (25), 62- 66.
- Nirajini, A., & Priya, K. B. (2013). Impact of capital structure on the financial performance of the listed trading companies in Sri Lanka. *International Journal of Scientific and Research Publications*, 3 (5), 1- 9.
- Osundian, J. (2014). Working capital management and profitability: Evidence from quoted food and beverage manufacturing firms in Nigeria, *Research Journal of Finance and accounting*, 5(4), 101 – 107.
- Owolabi, S.A. & Alu, C.N. (2012). Effective working capital management and profitability. A study of selected quoted manufacturing companies in Nigeria, *Business journal*; Aug. 2(6), 55-67.
- Richard, P., Devinney, T., Yip, G. & Johnson, G. (2009). Measurement organizational performance: Towards methodological best practice. *Journal of Management*, 35, 718-804.
- Sunday. O & Small.S (2012), Liquidity Management and Corporate Profitability: Case Study of Selected Manufacturing Companies Listed on the Nigerian Stock Exchange, *Business Management Dynamics Vol.2, No.2, Aug 2012*, pp.10-25.
- Umar, M., Tanveer, Z., Aslam, S., & Sajid, M. (2012). Impact of capital structure on the firm's financial performance: Evidence from Pakistan. *Research Journal of Finance and Accounting*, 3 (9), 1- 12.
- Vieira.R.S (2010), the relationship between liquidity and profitability, an exploratory study of airline companies between 2005 and 2008, Master Thesis, Umea University.
- Yadav.P (2014), Liquidity Analysis of Selected Pharmaceutical Companies: A Comparative Study, *International Journal of Advanced Research in computer and management sciences*, Volume 2, Issue 8.
- Yahaya, O. A., & Andow, H. A. (2015). Capital structure and firm's financial performance: Panel evidence of listed conglomerates firms in Nigeria. *Kaduna Business and Management Review*, 2 (1), 1- 23.