# Effect of Liquidity on Capital Employed and the Profitability of Selected Breweries in Nigeria

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**Abstract**

The financial performance of beverage firms is hinged basically on liquidity and profitability indicators. This study investigated the effect of liquidity on capital employed and the profitability of selected breweries in Nigeria. Liquidity was proxied by Current Ratio (CR) and Quick Ratio (QR), while profitability was proxied by Return on Capital Employed (ROCE). The study sought to investigate whether Current Ratio and Quick Ratio has significant positive or negative effect on ROCE of the brewery at the 5 percent significance level. Nigerian Breweries Plc was used as sample size based on judgmental sampling technique. Historical research design was employed, using quantitative method of data collection, presentation and test of hypotheses. This study utilized a secondary panel dataset from 2008 to 2018; with published financial statements of Nigerian Breweries Plc. The study used Single Linear Regression and OLS Regression Model for data analysis. The study found that there is significant relationship between current ratio and ROCE and there is no significant relationship between quick ratio and ROCE. The study concluded that management of Nigerian Breweries Plc can push up the current ratio to 1:1 from its current position of 0.65:1, to remedy the diverging relationship between revenue and PBI&T, as well as the unwholesome rising profile of operating expenses over PBI&T in subsequent accounting periods. The study recommended that management of Nigerian Breweries Plc should not keep a low current ratio else it might be forced to issue debenture securities which will decrease ROCE, and should not keep a low quick ratio else it might be forced to issue debenture securities which will decrease ROCE.

**Keywords: Liquidity, Capital Employed, Profitability, Breweries**

**Introduction**

Malt, wines and liquors are amongst the top staple beverage choice of millions of households in Nigeria (Willie, 2019). There are four (4) firms listed under the brewery and consumer goods section of Nigerian Stock Exchange, and regulated by Securities and Exchange Commission. They are Nigerian Breweries Plc, International Breweries Plc, Champion Breweries Plc, and Golden Guinea Breweries Plc. Nigerian Brewery Limited was incorporated in 1946 as the pioneer and largest brewing company in Nigeria, and got listed at The Nigerian Stock Exchange in 1973 (Willie, 2019). In June 1949, Nigerian Breweries Plc recorded a landmark when the first bottle of STAR lager beer rolled off its Lagos Brewery bottling lines and first brewery in Lagos has undergone several optimization processes. In 1957, the Company commissioned its second brewery in Aba; which was followed by Kaduna Brewery in 1963 and Ibadan Brewery in 1982; in 1993, the Company acquired its fifth brewery in Enugu and in 2003, a sixth brewery called Ama Brewery sited at Amaeke Ngwo in Enugu State was commissioned while operations in the old Enugu Brewery were discontinued in 2004 following the completion of Ama Brewery, and an ultra-modern malting plant was acquired in Aba in 2008. Following the introduction of Companies and Allied Matters Act in 1990, the name of the Company was changed to Nigerian Breweries Plc to reflect its public limited liability status. In October 2011, the Company acquired majority equity interests in two companies, Sona Systems Associates Business Management Limited, with two breweries in Ota and Kudenda, Kaduna, and Life Breweries Company Limited with a brewery in Onitsha, which is now a Distribution Centre. Another malting plant (located in Kudenda Brewery, Kaduna) was acquired as part of the Sona Systems acquisition, where Sona Systems and Life Breweries were merged with the Company in the middle of 2012 (Nigerian Breweries Annual Report, 2009-2018). At the end of 2014, an enlarged Nigerian

Breweries Plc emerged from a merger with Consolidated Breweries Plc, where three breweries at Imagbon, near Ijebu Ode, Awo-Omamma, near Owerri and Makurdi (now a Distribution Centre) were added to the existing eight breweries as a result of the merger. The Company has an export business which dates back to 1986, however the current export destinations are the United Kingdom, the Netherlands, United States of America, Canada, some part of Africa, the Middle East and Asia. The company is a subsidiary of Heineken N.V. Netherlands, with the latter holding a 54.10 per-cent controlling interest in its equity structure. Principal activities of the Company are to operate the brewery plants and bottling lines for the manufacture, packaging, sales and distribution of beverages in Nigeria and other countries. Firms are mostly concerned with their profitability, as profitability serves as one of the objectives of business necessary for long-time survival. Financial performance measures serve as a basis for evaluating the performance of a corporate entity (Liebrand, 2007). The return on assets (ROA), return on equity (ROE), return on capital employed (ROCE), gross profit margin and net profit margin are commonly used measures to assess financial performance in companies. Mueller (2018) also viewed liquidity as the availability of cash and cash equivalents to meet short term operational needs of firms. This ratio is a result of dividing cash and other liquid assets by the short-term borrowings and current assets such as cash, receivables, inventory and short time investments. They show the number of times the short-term borrowings are covered by the current liabilities. The diverging relationship between revenue and PBI&T of Nigerian Breweries PLC necessitates an urgent evaluation of the company's liquidity position. It is against this backdrop that this study investigates the effect of liquidity on capital employed and the profitability of selected breweries in Nigeria.

**Thesis Statement**
One of the consequences of the 2009 Central Bank of Nigeria (CBN) intervention in the management of eight banks, out of twenty-four banks in the country, was the near total absence of access to credit facilities by customers of those banks, which contribute to future trade receivables. The issue of banditry, militancy, revolution as well as terrorism in some regions of Nigeria, is a major challenge to people and businesses, as social life which boosts inventory marketing and liquidity, is practically brought to a standstill. In the money market, the deposit rate took a steep nose-dive to an average of about 2%, while the lending rate was an average of 18%, this invariably reduces the purchasing power of customers from both the informed and informal sector, who rely on borrowing to settle large trade credits. In 2013, private discos were created out of the former Power Holding Company of Nigeria (PHCN) in a privatization exercise of the Federal Government. The government was said to have generated over 3billion dollars, though the bulk of it went into severance packages to affected PHCN workers, however, there has been an increase in commercial rates of power supply bills, which invariable affects purchasing power of trade credit distributors. The CBN monetary policy was restrictive in 2012 and 2013, with a view to maintaining a single digit inflation rate, and foreign exchange stability, which resulted in a high yield of fixed income securities, but did not result into access to financial services for millions of small and medium size enterprises, who trade on products of Nigerian Breweries. A liquidity crisis can arise even at healthy companies; that is circumstances that make it difficult for them to meet short-term obligations such as repaying their loans and paying their employees. The diverging relationship between revenue and PBI&T of Nigerian Breweries Plc necessitates an urgent evaluation of the company's liquidity position. The issue in liquidity management is to achieve the desired trade-off between liquidity and profitability, according to Nahum & Amarjit (2013). Kimaiyo & Ochiri (2014) found that the purchasing department spends money on inventory while their stores or warehouses are holding huge stock of inventory, thereby blocking money and wasting space. Nsikan, et. al. (2015) found that there was a problem of inaccurate forecasts mainly because they lack real time inventory information on customers demand. Nyabwnga and Ojera (2012) in their study expressed that when faced with a stock-out, a consumer may find, try, and ultimately prefer a substitute product. Keeping a low acid test ratio might force management to hurriedly sell off inventory at a discount to raise funds when the accounts payable are due, and negatively affect the return on investment valuation of shareholders. This study seeks to investigates the effect of liquidity on capital employed and the profitability of selected breweries in Nigeria.

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**Aims and Objectives**

The aim of the study is to investigate how liquidity impacts on capital employed and profitability of Nigerian Breweries Plc. Specific objectives include:

a)    To evaluate the extent to which current ratio affects return on capital employed.

b)    To evaluate the extent to which quick ratio affects return on capital employed.

**Conceptual Review**

Liquidity is the capacity of an establishment to clear its short-term financial obligations in a timely way, (Syed, 2015; Lyndon & Paymaster, 2016; Raykov, 2017; Bragg, 2018). It is the ability to quickly convert manufacturing assets or inventory warehouses into cash for purposes of settling creditors, workers, dividends and others as at when due (Willie, 2019). High volumes of available cash imply, businesses are in a position to honour their financial obligations when they fall due without defaulting (Abubakar, et. al., 2018; Ejike & Agha, 2018; and Burke, 2019). Liquidity and profitability are viewed as dual economic expressions at the tail ends of a thread, where a movement in the direction of one point inevitably means, a drive away from the other (Willie, 2019).  In other words, the two are in a trade-off position. Firms therefore need a balance between liquidity and profitability in order to have an ideal level of liquid resources (Willie, 2019). Financial ratios are useful in assessing the financial soundness of the firm to which the financial variables relate; and can be analysed for a short period or long term depending on the scope. They can be classified into profitability ratios, liquidity and efficiency ratios, investment ratios, turnover ratios or activity ratios and leverage ratios (Asian, 2015). The liquidity of beverage firms can be evaluated and interpreted through the current ratio, quick ratio, or net working capital ratio (Willie, 2019). These are used to ascertain how liquid a firm is and its potentials in meeting maturing short term obligations, and to make investment decisions (Asian, 2015). For the purpose of this study, we adopted current ratio and quick ratio, as a measure of the liquidity of selected brewery companies. Current ratio is defined as "the ratio of current assets to current liabilities (Oxford 2005)". It tells investors and analysts how a company can maximize the current assets on its balance sheet to satisfy its current debt and other payables (Will, 2019). A current ratio that is in line with industry average or slightly higher is generally considered acceptable. A current ratio that is lower than the industry average may indicate a higher risk of distress or default; while the one lower than industry average may indicate a higher risk of distress or default. Similarly, if a company has a very high current ratio compared to their peer group, it indicates that management may not be using their assets efficiently. For example, imagine two companies which both have a current ratio of 0.80 at the end of the last quarter. On the surface, this may look equivalent but the quality and liquidity of those assets may be very different (Will, 2019). Quick ratio indicates the company's ability to instantly use its near-cash assets (that is, assets that can be converted quickly to cash) to pay down its current liabilities (Willie, 2019). It is also called an acid test which is designed to produce instant results—hence, the name (Will, 2019). A result of 1 is considered to be the normal quick ratio, as it indicates that the company fully equipped with exactly enough assets to be instantly liquidated to pay off its current liabilities. A company that has a quick ratio of less than 1 may not be able to fully pay off its current liabilities in the short term, while a company having a quick ratio higher than 1 can instantly get rid of its current liabilities. For instance, a quick ratio of 1.4 indicates that the company has $1.40 of liquid assets available to cover each $1 of its current liabilities. While such numbers-based ratios offer insights into certain aspects and viability of businesses, they may not provide a complete picture of the overall health of the business.

Profitability is the business's ability to generate earnings as compared to its expenses and other relevant costs incurred during a specific period of time (Willie, 2019).  It may be regarded as a relative term measurable in terms of profit and its relation with other elements that can directly influence the profit (Willie, 2019). Firm build up a good capital structure so it can generate return on investment, return on capital employed, return on asset, return on equity, net profit margin, gross profit margin (Okosun, 2022). People are however motivated to invest in a given asset by its expected returns, and that return is the level of profit from the investment, or the reward for investing (Lawrence, et al 2011). This return or profit on investment can be attributable to

shareholders in the form of dividends, and to management in the form of profit, depending on the prevailing situation (Okosun, 2022). Financial ratios are useful in assessing financial soundness of the firm to which the financial variables relate; and can be analysed for a short period or long term depending on the scope. They can be classified into profitability ratios, liquidity and efficiency ratios, investment ratios, turnover ratios or activity ratios and leverage ratios (Asian, 2015). Profitability ratios include returns on capital employed (ROCE), return on assets (ROA), return on equity (ROE), and profit margin. These ratios are used to assess the level of profitability of a firm it is used by investors in combination with investment ratios to take investment decisions. For the purpose of this study, we adopted return on capital employed, as a measure of the profitability of selected brewery companies. ROCE is a financial ratio that measures a company's profitability and the efficiency with which its capital is used. It measures how well a company is generating profits from its capital. It is the ratio of profit before interest & tax to total assets less current liability (Willie, 2019). ROCE is considered an important profitability ratio and is used often by investors when screening for suitable investment candidates (Will, 2019). ROCE is especially useful when comparing the performance of companies in capital-intensive sectors such as utilities and telecoms. This is because unlike other fundamentals such as ROE, which only analyses profitability related to a company's common equity, ROCE considers debt and other liabilities as well. This provides a better indication of financial performance for companies with significant debt. Adjustments may sometimes be required to get a truer depiction of ROCE. A company may seldom have an inordinate amount of cash on hand, but since such cash is not actively employed in the business, it may need to be subtracted from the Capital Employed figure to get a more accurate measure of ROCE. For a company, the ROCE trend over the years is also an important indicator of performance. In general, investors tend to favour companies with stable and rising ROCE numbers over companies where ROCE is volatile and bounces around from one year to the next (Will, 2019).

**Theoretical Framework**
Trade-off theory of liquidity was propounded by Modigliani and Miller (1963). Liquidity is the capacity of an establishment to defray its short-term financial obligations in a timely manner (Raykov, 2017; Abubakar et. al., 2018; Lyndon & Paymaster, 2016; Syed, 2015; Bragg, 2018; Ejike & Agha, 2018; Burke, 2019). High volumes of available cash implies, businesses are in a position to honor their financial obligations when they fall due without a default (Raykov, 2017; Abubakar, et al, 2018; Lyndon & Paymaster, 2016; Syed, 2015; Bragg, 2018; Ejike & Agha, 2018; and Burke, 2019). Saluju & Kumar (2012) and Puneet & Parmil (2012) viewed liquidity and profitability as dual economic expressions at the tail ends of a thread, where a movement in the direction of one point inevitably means, a drive away from the other. In other words, the two are in a trade-off position. According to the trade-off hypothesis of liquidity, firms target an ideal level of liquidity to bring into balance the costs and benefits of handling cash (Orshi, 2016). The costs of handling cash includes minimal rate of return on current assets as a result of liquidity premium and possible tax burdens; whilst benefits of keeping cash are that, firms spare exchange costs to raise reserves and do not ought to settle resources to meet commitments; and they can utilize liquid resources to fund operations if sources of finance are scarce (Orshi, 2016). From a trade-off position, firms with an increased level of leverage draw high cost in paying back the obligation hence hindering financial viability (Willie, 2019). It thus become tedious for such corporations to obtain other means of finance (Saluju & Kumar, 2012; Puneet & Parmil, 2012). Holding cash at that point, becomes an issue for both smaller and larger firms. Firms therefore need a balance between liquidity and profitability in order to have an ideal level of liquid resources (Willie, 2019).

**Review of Prior Studies**
Abubakar, et al. (2020) studied the impact of working capital management on financial performance of selected quoted firms in Nigeria, revealed that cash conversion cycle showed a positive significant impact on the ROE while debt equity ratio and inventory conversion period have no significant impact on the ROE. Osama and Heba (2020) investigate the possible non-linear effect of net working capital level on profitability for MENA

region listed companies, found that NWC levels had a non-linear effect on profitability using ROA as a profitability proxy while results were insignificant using ROE as a profitability proxy in the selected firms. Zanxin, et al. (2020) examined the impact of working capital management and working capital strategy on firm's financial performance across different stages of the corporate life cycle; revealed that, overall, WCM is negatively associated with firm performance, however, this association is not static across different stages of a firm's life cycle. Mabandla and Makoni (2019) investigated the nexus between working capital management and the financial performance of firms; found a positive relationship between the inventory conversion period and profitability of firms; a negative relationship between the average collection period and profitability; and a positive relationship between the average payment period and profitability. Imhanzenobe, (2019) studied the impact of operational efficiency on financial sustainability of listed manufacturing companies in Nigeria, and found that operating expenses had negative significant relationship with ROA while assets turnover had a positive significant relationship with ROA, but did not examine the relationship between liquidity and ROCE. Elumah & Shobayo, (2018) studied the performance analysis of Nigerian brewery industry, and found that that the firms were efficient in using its asset to generate profit and ROI, while the industry financial risk was relatively low, but the scope of research was limited to a five years period. Ashutosh & Gurpreet (2018) did a comparative study on the financial performance of sugar mills in Punjab, found that there is no significant nor positive relationship between current ratio and ROCE; and that there is no significant nor positive relationship between quick ratio and ROCE. Ashok et al (2018) studied the liquidity and profitability trade-off amongst a cross-section of Indian pharmaceutical companies, found that the higher the value of both working capital to current assets ratio and liquid resources to current assets ratio, the more favourable is the liquidity position of a firm, while, the lower the value of stock to current assets ratio, the more favourable is the liquidity position of the firm. Abdelkader et al (2018) carried out a study on the determinants of performance of Tunisia insurance companies using the case of life insurance, found that there is no significant nor positive relationship between current ratio and ROCE; and that there is no significant nor positive relationship between quick ratio and ROCE. Batchimeg (2017) carried out a study on the financial performance determinants of organizations using the case of Mongolian companies, found that there is no significant nor positive relationship between current ratio and ROCE; and that there is no significant nor positive relationship between quick ratio and ROCE. Rizwan (2016) studied the impact of liquidity management on profitability of Pakistani firms using a case of KSE-100 Index, found that there is no significant nor positive relationship between liquidity measured by quick ratios, and ROCE. Mohammed et al. (2015) investigated the liquidity-profitability relationship with evidence from companies listed in Saudi stock exchange, found that there is no significant nor positive relationship between liquidity measured by quick ratios, and ROCE. Asian (2015) assessed the impact of liquidity and profitability ratios on growth of profits in pharmaceutical firms in Nigeria, found that there is a significant positive relationship between current ratio and return on capital employed; and that there is a significant positive relationship between quick ratio and ROCE. Pratheepan (2014) carried out a panel data analysis of profitability determinants with empirical results from Sri Lankan manufacturing companies, found that there is no significant and no positive relationship between liquidity measured by current ratio, and profitability measured by ROCE. Aremu et al. (2013) studied the determinants of banks' profitability in a developing economy with evidence from Nigerian banking industry, found that there is a significant positive relationship between current ratio and ROCE; and that there is a significant positive relationship between quick ratio and ROCE. In an attempt to fill the time and industry gap in previous research, this study investigated the effect of liquidity on capital employed and profitability in breweries, with a case study of Nigerian Breweries Plc and a time series data of a period of ten (10) years covering from 2008 – 2018.

**Methodology**
Historical research design was employed, with quantitative method of data collection, presentation and test of hypotheses. The population of study include five (5) listed breweries such as Champion Breweries Plc, Guinness Nigerian Plc, Golden Guinea Breweries Plc, International Breweries Plc, and Nigerian Breweries Plc (Source: Nigerian Exchange Group Plc). The sample size is Nigerian Breweries Plc with a data of ten (10) years from

2008 to 2017; based on a judgmental sampling technique and preceding year basis of measurement. A secondary panel dataset on current ratio, quick ratio and return on capital employed; was extracted from published annual reports and accounts of the Company. Single Linear Regression and Ordinary Least Squares Model was used for data analysis with the aid of Microsoft Excel Suite.

**Presentation of Data**

| YEAR | Current Assets # 'Thousand | Current Liabilities # 'Thousand | Current Ratio # 'Thousand |
|---|---|---|---|
| **2008** | 40,625,416 | 54,775,451 | 0.74 |
| **2009** | 37,629,344 | 42,318,498 | 0.89 |
| **2010** | 40,284,272 | 44,879,962 | 0.90 |
| **2011** | 56,999,297 | 67,718,581 | 0.84 |
| **2012** | 56,866,627 | 86,834,468 | 0.65 |
| **2013** | 45,285,469 | 100,295,715 | 0.45 |
| **2014** | 56,930,683 | 114,554,626 | 0.50 |
| **2015** | 57,480,020 | 140,655,590 | 0.41 |
| **2016** | 74,558,034 | 144,856,800 | 0.51 |
| **2017** | 87,491,662 | 156,698,905 | 0.56 |

*Table 1.1 Ten Years Summary of Nigerian Breweries Current Ratio (Source: Nigerian Breweries Annual Report and Accounts 2008-2017 extract)*
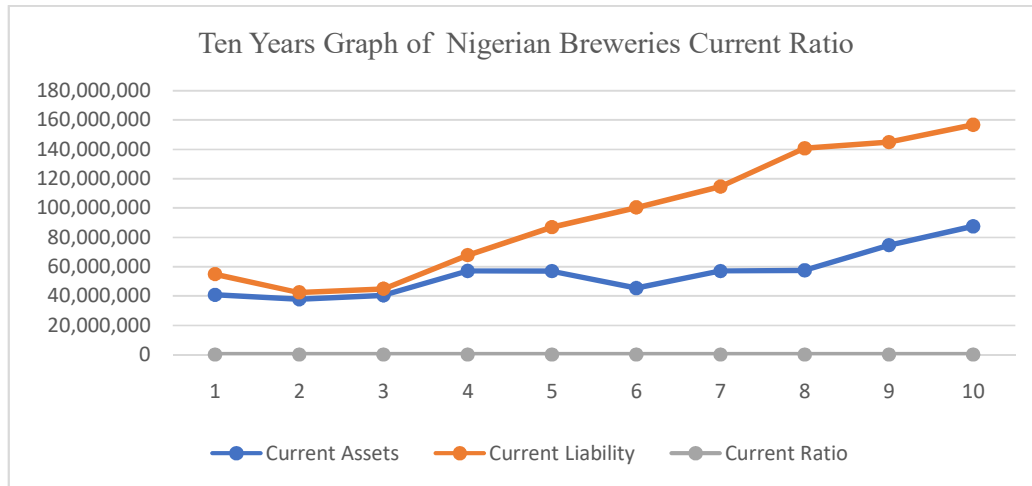


Ten Years Graph of Nigerian Breweries Current Ratio

Table 1.1 presents data on Ten Years Summary of Nigerian Breweries Current Ratio, computed based on the ratio 1 – current ratio formula. Figure 1.1 presents a time series chart on the Ten Years Summary of Nigerian Breweries Current Ratio, which was developed using Microsoft Excel 2016. This data forms basis for stationary test analysis as well as linear regression analysis and test of hypotheses.

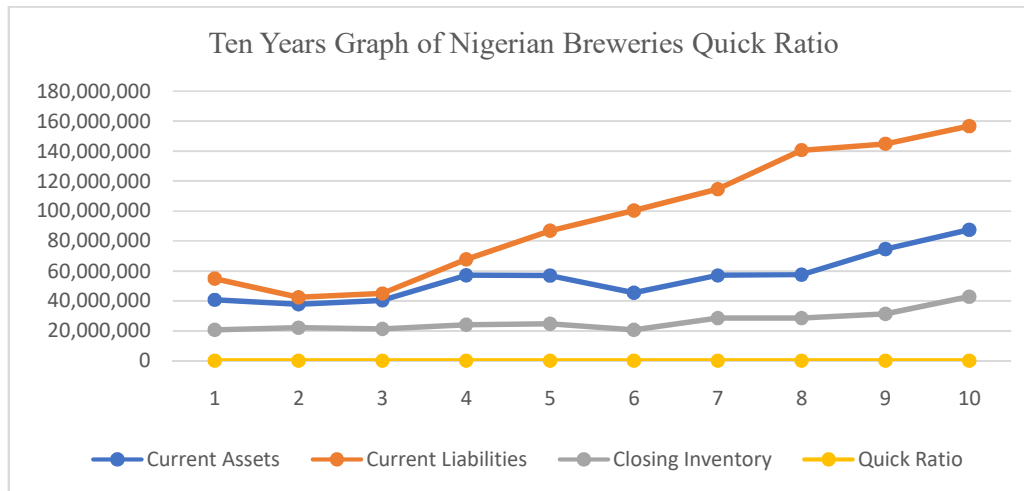| Table 1.2 Ten Years Summary of Nigerian Breweries Quick Ratio | | | |
|---|---|---|---|
| Source: Nigerian Breweries Annual Report and Accounts 2008-2017 extract | | | |
| **YEAR** | **Current Assets # 'Thousand** | **Current Liabilities # 'Thousand** | **Closing Inventory # 'Thousand** | **Quick Ratio # 'Thousand** |
| **2008** | 40,625,416 | 54,775,451 | 20,741,461 | 0.36 |
| **2009** | 37,629,344 | 42,318,498 | 22,064,847 | 0.37 |
| **2010** | 40,284,272 | 44,879,962 | 21,231,097 | 0.42 |
| **2011** | 56,999,297 | 67,718,581 | 24,056,210 | 0.49 |
| **2012** | 56,866,627 | 86,834,468 | 24,652,723 | 0.37 |
| **2013** | 45,285,469 | 100,295,715 | 20,643,153 | 0.25 |
| **2014** | 56,930,683 | 114,554,626 | 28,478,459 | 0.25 |
| **2015** | 57,480,020 | 140,655,590 | 28,409,703 | 0.21 |
| **2016** | 74,558,034 | 144,856,800 | 31,244,703 | 0.30 |
| **2017** | 87,491,662 | 156,698,905 | 42,728,862 | 0.29 |



Ten Years Graph of Nigerian Breweries Quick Ratio

Table 1.2 presents data on Ten Years Summary of Nigerian Breweries Quick Ratio, computed based on the ratio 2 – quick ratio formula. Figure 1.2 presents a time series chart on the Ten Years Summary of Nigerian Breweries Quick Ratio, which was developed using Microsoft Excel 2016. This data forms basis for stationary test analysis as well as linear regression analysis and test of hypotheses.

| Table 4.1.4 Ten Years Summary of Nigerian Breweries Return on Capital Employed | | | |
|---|---|---|---|
| Source: Nigerian Breweries Annual Report and Accounts 2008-2017 extract | | | |
| **YEAR** | **Profit Before Interest & Tax # 'Thousand** | **Total Assets at Year End # 'Thousand** | **Current Liability at Year End # 'Thousand** | **Return on Capital Employed # 'Thousand** |
| **2008** | 37,785,009 | 104,412,640 | 54,775,451 | 0.76 |
| **2009** | 42,138,251 | 106,987,883 | 42,318,498 | 0.65 |
| **2010** | 45,150,084 | 114,389,432 | 44,879,962 | 0.65 |
| **2011** | 58,566,497 | 196,936,631 | 67,718,581 | 0.45 |
| **2012** | 64,491,873 | 253,633,629 | 86,834,468 | 0.39 |
| **2013** | 69,722,627 | 252,759,633 | 100,295,715 | 0.46 |
| **2014** | 67,558,219 | 349,676,784 | 114,554,626 | 0.29 |
| **2015** | 62,772,975 | 356,707,123 | 140,655,590 | 0.29 |

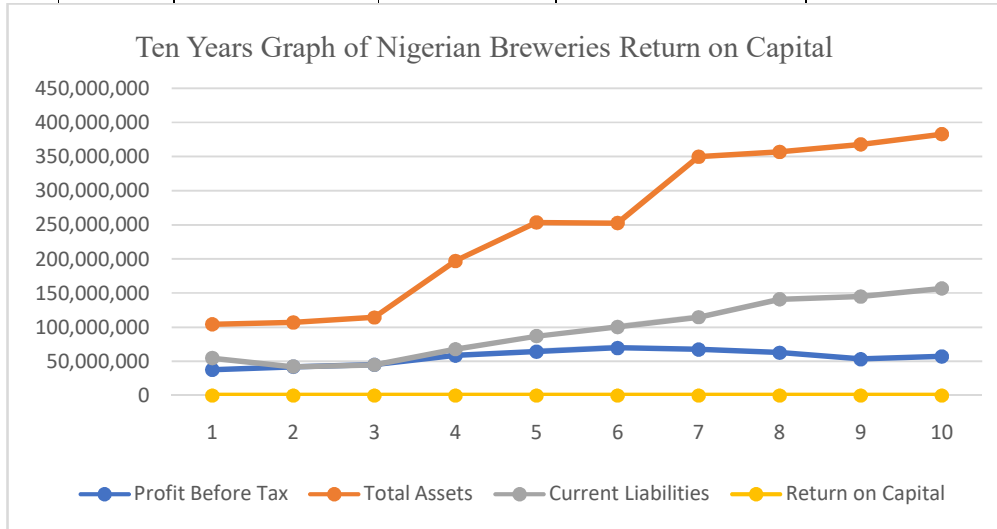| | | | | |
|---|---|---|---|---|
| **2016** | 53,324,914 | 367,639,915 | 144,856,800 | 0.24 |
| **2017** | 57,298,384 | 382,726,540 | 156,698,905 | 0.25 |



Table 1.3 presents data on Ten Years Summary of Nigerian Breweries Return on Capital Employed, computed based on ROCE formula. Figure 1.3 presents a time series chart on the Ten Years Summary of Nigerian Breweries Return on Capital Employed, developed using Microsoft Excel 2016. This data forms basis for stationary test analysis, as well as linear regression analysis and test of hypothesis.

**Statistical Analysis**

1) The effect of current ratio on profitability (measured by return on capital employed)

| Regression Statistics | |
|---|---|
| Multiple R | 0.744987 |
| R Square | 0.555006 |
| Adjusted R Square | 0.499381 |
| Standard Error | 0.132287 |
| Observations | 10 |

ANOVA

| | df | SS | MS | F | Significance F |
|---|---|---|---|---|---|
| Regression | 1 | 0.17461 | 0.17461 | 9.977753 | 0.01342 |
| Residual | 8 | 0.14 | 0.0175 | | |
| Total | 9 | 0.31461 | | | |

| | Coefficients | Standard Error | t Stat | P-value |
|---|---|---|---|---|
| Intercept | -0.03964 | 0.158417 | -0.25022 | 0.808727 |
| CR | 0.748276 | 0.236889 | 3.158758 | 0.01342 |

2) The effect of quick ratio on profitability (measured by return on capital employed)

| Regression Statistics | |
|---|---|
| Multiple R | 0.538515 |
| R Square | 0.289998 |
| Adjusted R Square | 0.201248 |
| Standard Error | 0.167098 |
| Observations | 10 |

ANOVA

| | df | SS | MS | F | Significance F |
|---|---|---|---|---|---|
| Regression | 1 | 0.091236 | 0.091236 | 3.267578 | 0.10828 |
| Residual | 8 | 0.223374 | 0.027922 | | |
| Total | 9 | 0.31461 | | | |

| | Coefficients | Standard Error | t Stat | P-value |
|---|---|---|---|---|
| Intercept | 0.058149 | 0.219361 | 0.265085 | 0.797646 |
| QR | 1.162691 | 0.643208 | 1.807644 | 0.10828 |

**Test of Hypotheses**
To make a decision about null hypothesis Ho; the computed value due to regression, denoted by SIG or P-value, is compared with the chosen alpha, denoted by $F_\alpha$ or SIG (0.05). The computed P-value of ANOVA is used to test the null hypothesis of equal population means between variable X and variable Y. If P-value is greater than α (0.05), then you accept Ho because one independent variable has no significant effect on one dependent variable. If P-value is less than α (0.05), then you reject Ho and accept $H_1$ because one independent variable has a significant effect on one dependent variable.

    $H_0$: Sig. > 0.05        Accept Ho, where table value due to regression is more than chosen alpha
    $H_1$: Sig. < 0.05        Reject Ho, where table value due to regression is less than chosen alpha

**Ho1 There is no significant relationship between current ratio and profitability measured by return on capital employed**
Results showed R-Coefficient at 0.744, which implies that there is a 74.4 per cent correlation between current ratio and return on capital employed. Results also showed R-Square at 0.555, which implies that current ratio has a 55.5 per cent on the return on capital employed. While ANOVA table shows that F-state of 9.977 is significant at p-value (.013) which implies that there is a significant relationship between current ratio and return on capital employed.

**Ho2 There is no significant relationship between quick ratio and profitability measured by return on capital employed**
Results showed R-Coefficient at 0.538, which implies that there is a 53.8 per cent correlation between quick ratio and return on capital employed. Results also showed R-Square at 0.289, which implies that quick ratio has a 28.9 per cent on the return on capital employed. While ANOVA table shows that F-state of 3.267 is not significant at p-value (.108) which implies that there is no significant relationship between quick ratio and return on capital employed.

| LIQUIDITY | PROFITABILITY | RELATIONSHIP |
|---|---|---|
| Current Ratio | Return on Capital Employed | SIGNIFICANT |
| Quick Ratio | Return on Capital Employed | INSIGNIFICANT |

Table 1.4: Test of Hypotheses on Liquidity and Profitability

**Conclusions**

The study uncovered how current ratio had a significant effect on the firms' return on capital employed (ROCE) but quick ratio did not have any significant effect on the firms' return on capital employed (ROCE), during the period covered. The study therefore concluded that the management of Nigerian Breweries Plc can push up the current ratio to 1:1 from its current position of 0.65:1, to remedy the diverging relationship between revenue and PBI&T, as well as the unwholesome rising profile of operating expenses over PBI&T in subsequent accounting periods.

**Recommendations**

It was recommended that the management:

1. Nigerian breweries should not keep a low current ratio else it might be forced to issue debenture securities which will decrease return on capital employed.
2. Nigerian breweries should not keep a low quick ratio else it might be forced to issue debenture securities which will decrease return on capital employed.

**References**

Abdelkader, D. & Lamia, J. (2018). Determinants of performance of Tunisia insurance companies: Case of life insurance. *International Journal of Innovation and Applied Studies Journals 6(1),* 90-96. *https://hal.archives-ouvertes.fr/hal-01695997*

Abubakar, A., Sulaiman I., & Haruna, U. (2018). Effect of firms' characteristics on financial performance of listed insurance companies in Nigeria. *African Journal of History and Archaeology, 3*(1), 1-9.

Abubakar, Y., Umaru, D. & Olamuyiwa, O. O. (2020). Working capital management and financial performance of selected quoted firms in Nigeria. *International Journal of Research and Scientific Innovation*, *7*(4), 62-67.

Al-Jafari, M. K. & Alchami, M. (2014). Determinants of bank profitability: Evidence from Syria. *Journal of Applied Finance and Banking, 4*(1), 17-45.

Aremu, M. A., Ekpo I. C, & Mustapha A. M. (2013). Determinants of banks' profitability in a developing economy: Evidence from Nigerian banking industry. *Interdisciplinary Journal of Contemporary Research in Business 4*(9), 155-181.

Ashok, K. P. G., Namita, R. & Chaitrali, G. (2018), liquidity and profitability trade-off: (A study of Indian pharmaceutical companies), *NMIMS Journal of Economics and Public Policy, 3*(1), 42-56.

Ashutosh, G. & Gurpreet, R. (2018), financial performance of sugar mills in Punjab: A comparative study. *Indian Journal of Accounting (IJA), 50*(1), 87-96.

Asian A., (2015). Assessing the impact of liquidity and profitability ratios on growth of profits in pharmaceutical firms in Nigeria. *European Journal of Accounting, Auditing and Finance Research 3*(10), 97-114

Batchimeg, B. (2017). Financial performance determinants of organizations: The case of Mongolian companies. *Journal of Competitiveness, 9*(3), 22-33.

Bragg, S. (2018). *Liquidity*. Retrieved from https://www.accountingtools.com/articles/2017/5/13/liquidity

Burke, A. (2019). *The definition of liquidity in finance*. Retrieved from https://smallbusiness.chron.com/definition- liquidity-finance-36477 .html

Drew, J., McCallum B. & Roggenhofer, S. (2016). *Journey to lean: Making operational change stick*. Springer.

Ejike, S. I. & Agha, N. C. (2018). Impact of operating liquidity on profitability of pharmaceutical firms in Nigeria. *International Journal of Academic Research in Accounting, Finance and Management Sciences, 8*(3), 73-82.

Elumah, L. O., & Shobayo, P. B. (2018). Performance analysis of Nigerian brewery industry. *Binus Business Review, 9*(1), 47-53.*https://doi.org/10.21512/bbr.v9i1.4047*

Hagel J, Brown J. S. & Davison L. (2010). *The best way to measure company performance*. Available at: https://hbr.org/2010/03/thebest-way-to-measure-company.html

Imhanzenobe, J. O. (2019). Operational efficiency and financial sustainability of listed manufacturing companies in Nigeria. *Journal of Accounting and Taxation 11*(1), 17-31.

Kimaiyo, K. K. & Ochiri, G (2014). Role of inventory management on performance of Manufacturing Firms in Kenya – A case of new Kenya Cooperative Creameries. *European Journal of Business Management, 2*(1), 336-341.

Lawrence, J. G., Michael, D. & Scott, S. (2011). *Fundamentals of investing,* eleventh edition. Pearson Education Inc.

Liebrand, R. I. (2007). *Statistics for management (7th edition). Prentice Hall.*

Lyndon, M. E. & Paymaster, F. B. (2016). Liquidity management and profitability: A study of selected food and beverage companies in Nigeria. *International Journal of Management Sciences, 7*(4), 217-225.

Mabandla, N. Z. & Makoni, P. L. (2019). Working capital management and financial performance: evidence from listed food and beverage companies in South Africa. *Academy of Accounting and Financial Studies Journal*, *23*(2), 1-10.

Modigliani, F. & Miller, M. (1963). The cost of capital, corporate finance and the theory of investment. *American Economic Review, 48,* 261-297.

Mohammed, Z. R., Muhammad, N. K., & Imran, K. (2015). Investigating liquidity-profitability relationship: Evidence from companies listed in Saudi stock exchange (Tadawul). *Journal of Applied Finance & Banking, 5*(3), 159-173.

Mueller, J. (2018). Understanding financial liquidity. Retrieved from https://www.investopedia.com/articles/basics/07/liquidity.asp#ixzz5WdDY41rG

Mwashi, P. T. & Miroga, J. (2018). Influence of liquidity management practices on profitability of deposit taking Saccos in Kakamega County Kenya. *The Strategic Journal of Business & Change Management, 5*(4), 902-922.

Nahum, N. & Amarjit, S. G. (2013). *The impact of corporate governance on working capital management efficiency of American manufacturing firms.* Emerald Publishing Ltd.

Nsikan, E. F., Etim, J. J. & Ime, T. U. (2015). Inventory management practices and operational performance of flour milling firms in Lagos, Nigeria. *International Journal of Supply and Operations Management, 1*(4), 392-406.

Okosun, E. J. (2022). *Capital structure & financial performance of listed breweries in Nigeria*. Department of Accounting, Ignatius Ajuru University of Education.

Orshi, T. S. (2016). *Impact of liquidity management on the financial performance of listed food and beverages companies in Nigeria.* Federal University Dutsin-Ma.

Osama, E. & Heba, A. (2020). Working capital and financial performance in MENA region. *Journal of Humanities and Applied Social Sciences*, *3*(4), 257-280. DOI https://dx.doi.org/10.1108/JHASS-02-2020-0036

Oxford (2005). *Oxford dictionary of accounting, third edition* (edited by: Gary, O., & Jonathan, L.). Oxford University Press.

Pratheepan, T. (2014). A panel data analysis of profitability determinants: Empirical results from Sri Lankan

manufacturing companies. *International Journal of Economics, Commerce and Management, 2*(12), 1-9.

Puneet, S. & Parmil, K. (2012). Liquidity and profitability trade-off. *International Journal of Advanced Research in Management and Social Science, 1*(3), 77-84.

Raykov, E. (2017). The liquidity-profitability trade-off in Bulgaria in terms of the changed financial management functions during crisis. *Management, 22*(1), 135-156.

Rizwan, I. (2016). Impact of liquidity management on profitability of Pakistani firms: A case of KSE-100 Index. *International Journal of Innovation and Applied Studies, 14*(2), 304-314.

Saluja, P., & Kumar, P. (2012). Liquidity and profitability trade-off: A study on Airtel Bharti limited. *International Journal of Advanced Research in Management and Social Sciences, 1*(3), 77-84.

Syed, A. (2015). Impact of liquidity and management efficiency on profitability: An empirical study of selected power distribution utilities in India. *Journal of Entrepreneurship, Business and Economics, 3*(1), 31-49.

Will, K. (2019). *Quick ratio definition.* *https://www.investopedia.com/terms/q/quickratio.asp*

Willie, C. I. (2019). Liquidity and profitability of Nigerian Breweries Plc (2008-2017). Department of Accounting, Ignatius Ajuru University of Education.

Zanxin, W., Minhas, A. & Ahsan, A. (2020). The interplay between working capital management and a firm's financial performance across the corporate life cycle. *Sustainability 2020, 12*(1661), 1-16. DOI:10.3390/su12041661

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