# Liquidity Management and Corporate Profitability: Evidence from Nigerian Listed Consumer Goods Companies

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## Abstract

*This study investigates how liquidity management helps Nigerian listed consumer goods companies to increase their profitability to the benefit of shareholders. The study uses secondary data from the Audited Annual Accounts and Report of the fourteen sampled out of the twenty listed consumer goods companies on the floor of the Nigerian Stock Exchange for the period of eight years from 2012 to 2019. The samples was based on data availability and must have not been delisted for the period under study. Panel data regression in STATA was used for the analysis. Three regression were carry out and the result indicates that liquidity management has the ability to increase the profitability of listed consumer goods companies in Nigeria by about 58%. Hence, for every ₦100 investment in liquidity and was properly manage; the companies might generate a profit ₦11.4 as reveals by a mean 0.11. Moreover, despite the fact that the consumer goods companies do not maintain the default liquidity position, the maximum and minimum value of 2.837 and .074, the sampled companies' current assets outweigh their current liabilities. Thus, the study recommends the need for the consumer goods companies in Nigeria to ensure effective and efficient inventory management system that will help them to overcome stock-out problem. Moreover, monitoring mechanism should also be in place to ensure credit sales are given to creditworthy customers, with good credit rate. While, government can help the companies through lower cost of capital and import duties to help them in increase profitability.*

***Keywords**: Liquidity, profitability, inventory, liquidity, companies*

## 1.0 INTRODUCTION

Many factors contribute to growth and survival of corporate entities, which can be internal and external factors. According to Madugba & Ogbonnaya (2016), Ademola (2014) among the most important factor is liquidity and its management. This is because liquidity helps companies to maintain daily operations. Hence, inadequate management of working might jeopardise future survival of companies and consequently affects their market value (Ogundipe, Idowu & Ogundipe, 2012). Liquidity represent the circulation fluid of businesses that ensure the movement of funds from one point to the other and ensure optimal utilization. The optimal utilization will greatly help companies remain as a going concern entity (Ademola, 2014).

For an optimal liquidity to be achieve there is need for companies to have a balance between current assets and current liabilities. The balance will help them to overcome operational difficulties in an effective and efficient maaner (Ajayi, Abogun & Odediran, 2017; Watson & Head, 2014). The effectiveness will be in the form an appropriate cash balance, appropriate

inventory level, appropriate time to place order of new inventory, volume of debt to offer to customers and the length of time to settle outstanding payables. Therefore, inappropriate combination of the current assets and current liabilities might negatively affect corporate survival and their profitability (Abdulazeez, Baba, Fatima & Abdulrahaman, 2018). Liquidity assess company's aptitude to strike a favourable balance between its current assets and liabilities in order to guarantee short-term financial position and ability to sustain daily business activities.

Consequently, consumer goods companies unlike service companies cannot do without stock of inventory, offer product on post-paid basis and must hold cash balance. With the increasing Nigeria population to over 200 million citizens, there is potential market growth for the consumer goods companies; couple with the implementation of the new minimum wage. Against this background, the study attempt to assess the impact of liquidity management on profitability of Nigerian listed consumer goods.

## 2.0 LITERATURE REVIEW

### 2.1 The concept of liquidity

Various scholars and researchers define liquidity in almost the same way, but they differ in having an agreement on what should be an appropriate combination of the company's liquidity (Abdulazeez, Baba, Fatima & Abdulrahaman, 2018; Iqbal, Ahmad, & Riaz, 2014; Ogundipe, Idowu, & Ogundipe, 2012). Hence, the success of a company depends on its ability to generate and effectively manage excess fund over possible expenditure (Madugba & Ogbonnaya, 2016; Chary, Kasturi & Kumar, 2011).

Ajayi, Abogun & Odediran (2017) defined liquidity as the net total company's investment in current assets and current liabilities. The purpose of the investment is to meet short-term financial obligations of the company and other operational requirement that will facilitate smooth operation of the company.

Arnold (2013), Watson & Head (2013) grouped liquidity into three main components (inventory, receivables and payables and cash management). Inventory comprises all stock of raw materials, partly completed products and finished products. Receivables represent amount receive or to be receive from customers, while payables are outstanding settle to be made suppliers in the ordinary course of business operation. Cash management on the other is the policy formulation to defer settlement of liabilities and hasting debt collection from customers.

According to Abdulazeez, Baba, Fatima & Abdulrahaman (2018) companies can measure their liquidity efficiency using the following:

- Debtors' collection period, which refers to the period in days it take customers to settle their debts on goods and services supplied to them on credit. That is how long it takes the company receive cash from credit sales. This is the time taken by customers to settle their liabilities in respect of goods and service supplied to them on credit. The shorter the time the better might be the company's profitability (Valahzaghard, & Ghalhari, 2014).
- Creditors' payment days on the other hand, refers to the number of days the company takes to settle its suppliers

for the goods and services supplied by them on credit. The longer the days the better for the company, because the supplier will serve as an interest free loan. Nevertheless, the suppliers might not allow unnecessary delay in payment, except in a highly competitive market (Pourali, Imeni, & Taherpour, 2013).

- Cash conversion cycle is the length of time in days that takes companies to purchase input, process them into finished products and receive money from their customers. The lower the days to better for the company and vice versa (Anser & Malik, 2013; Attari & Raza 2012). That is the number of days a company take to convert its short-term resources into cash. This will facilitate raising internal finance and growth of the company.

However, Lamberson (1990) in Madugba & Ogbonnaya (2016) opines that the main reason of liquidity is to maintain optimum level of cash and marketable securities in order to maximize the value of the company. Madugba & Ogbonnaya (2016), uses the following to measure liquidity of a company:

Liquidity cycle, which refers to the average length of time the company was able to turn short-term fund into cash. It measure liquidity in terms of company's ability to settle short-term obligations (Usama, 2012).

Net liquidity, this is the difference between company's current assets and current liabilities over a given period. To avoid solvency and going threat, current assets must adequate to cover current liability. According to Watson & Head (2013), the ideal current ratio is 2:1, but this is not applicable to all companies. Therefore companies should efficiently plan and control their current assets and liabilities in such a way to maintain liquidity (Ebenezer & Asiedu, 2013).

### 2.2 Empirical review

Corporate financial survival depends largely on its ability to generate excess funds against it possible expenses. Therefore, liquidity need to be efficiently utilise because of their high proportion against total assets employed (Chhapra & Naqvi, 2010). This may involve planning and controlling current assets and liabilities in order to avoid settle risk. Proper management of liquidity has the potential of increasing profitability and market value (Madugba & Ogbonnaya, 2016; Ul-Haq, Sohail, Zaman & Alam, 2011).

Plethora of empirical studies on liquidity management was conducted across the world to postulate its relationship with corporate profitability. Gulia (2014), assess liquidity management on the firms' profits after tax and cash profits of the leading Indian pharmaceuticals firms. The study employed correlation and multiple regression and conclude that there exists relationship among variables with significant impact. Madugba & Ogbonnaya (2016) investigate the effect of liquidity management on profitability of manufacturing companies in Nigeria using published audited financial statement with the aid of multiple regressions. The result reveals that average payment period and average collection period has significant and positive impacts on both Earnings per share and Return on capital employed. In contrast to their findings, Abdulazeez, Baba, Fatima & Abdulrahaman (2018) results shows a negative relationship except for cash conversion cycle, which has positive but insignificant relationship with profitability. In

line with this, Le, Vu, Le, Du & Tran (2018) opined on a positive association between liquidity and firm financial from Ho Chi Minh Stock Exchange. However, Ajayi, Abogun & Odediran (2017) reported a contrasting result using correlation and panel regression analysis, where they that a negative relationship exists between cash conversion cycle (CCC) and profitability while there is a positive relationship between average collection period (ACP) and profitability. While Chhapra & Naqvi (2010) study using correlation, regression analyses and analysis of variance shows a strong positive and significant relationship between liquidity management and firm's profitability in Pakistan's textile sector. Moreover, Ul-Haq, Sohail, Zaman & Alam (2011) study from Pakistan cement industry with the aid of correlation coefficient and multiple regression analysis reported positive association between liquidity management and profitability. In line with their findings, Taani (2012) study from Jordan listed companies using Pearson's rank correlation test, ANOVA F- test, and multiple regression analysis reported significant relation between liquidity management policy and net income. Agha (2014) reported that liquidity management has a significant impact on the profitability of listed pharmaceutical companies on Karachi stock exchange. Alavinasab & Davoudi (2013) study that investigate the relationship between liquidity management and profitability for listed companies on Tehran stock exchange using cash conversion cycle, the current ratio and current asset to total asset ratio as the proxies of working of liquidity and current liabilities to total asset ratio and debt to asset ratio as the proxies of profitability. The result from Multivariate regression and Pearson correlation test indicates a negative and significant relationship existed between liquidity management and profitability. However, contrary to their findings, Jayarathne (2014) who examine the impact of liquidity management might have on profitability of listed manufacturing companies in the Colombo Stock Exchange, Sri Lanka and found out that there is a negatively relationship exist between liquidity proxied by account receivable period, inventory turnover period and cash conversion cycle and companies profitability. The study further recommend for effective management of liquidity to enhance profitability.

## 3.0 RESEARCH METHOD

The aim of this paper as mentioned before is to study the impact of liquidity management on profitability Nigerian listed consumer goods industry. The population of the study comprises all the twenty (20) Consumer goods companies listed on the floor of Nigeria Security as at 22nd November 2020.

**Table 14: Population of the study**

| S/N | Company | Date of Listing | Date of Incorporation |
|---|---|---|---|
| 1 | Cadbury | 1st January 1976 | 9th January 1965 |
| 2 | Champion Bre. | 1st September 1983 | 31st July 1974 |
| 3 | Dangote Sugar | 8th March 2007 | 4th January 2005 |
| 4 | DN Tyre & Rubber | 21st October, 1961 | 21st October 1961 |
| 5 | Flour mills of Nig. | 14th August, 1979 | 29th September 1960 |
| 6 | Golden Guinea Brew. Plc | 1st January 1979 | 26th September 1962 |
| 7 | Guiness | 2nd January 1965 | 29th April 1950 |
| 8 | Honeywell Flour | 20th October 2009 | 9th July 1985 |
| 9 | Int. Breweries | 30th March, 1992 | 22nd December 1971 |
| 10 | Mcnichols | 18th December 2009 | 26th April 2004 |
| 11 | Multi-Trex Integrated Foods | 1st November 2010 | 30th October 1999 |
| 12 | N Nig. flour mills | 26th September 1978 | 29th October 1971 |
| 13 | Nascon | 20th October 1992 | 30th April 1973 |
| 14 | Nestle | 20th April 1979 | 25th September 1969 |
| 15 | Nig. Breweries | 5th September 1973 | 16th November 1946 |
| 16 | Nigerian Enamelware | 28th December 1979 | 21st May 1960 |
| 17 | PZ | 18th February, 1974 | 12th April 1948 |
| 18 | Unilever | 1st April 1973 | 4th November 1923 |
| 19 | Union Dicon Salt | 23rd September 1993 | 12th November 1991 |
| 20 | Vitafoam | 1st November, 1978 | 8th April 1962 |

**Source: Generated by the researcher from audited annual account and report of the consumer goods companies.**

The study adopted an Ex-post factor research design and utilizes secondary data that was extracted from the audited annual account and report of the fourteen (14) sampled listed consumer goods companies. The companies were selected based on data availability, have constantly published it audited annual account and report for eight years from 2012 to 2019 financial year and must have not been delisted for the period under study (Ansah & Yeoh, 2005). The choice of seven years from 2012 is because that was the first year Nigerian firms produced financial statement using IFRS as directed by the Nigerian Financial Reporting Council. Thus, the sampled consumer goods companies are:

**Table 15: Sample of the study**

| | | | |
|---|---|---|---|
| 1 | Cadbury | 1st January 1976 | 9th January 1965 |
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**Source: Generated by the research from Table 1**

Source: Lab Test Research Result 2018

In analysing the data of the sampled consumer goods companies, panel regression utility with modification is used to define the association between liquidity management and their profitability. Abdulazeez, Baba, Fatima & Abdulrahaman (2018); Le, Vu, Le, Du & Tran (2018); Ajayi, Abogun & Odediran (2017) and Madugba & Ogbonnaya (2016) also used the regression utility function. The justification for the use of panel data regression is because the sample data was made-up of time series with cross sectional characteristics (Hsiao, 2003).

$$CFPit = \beta0 + \beta1SLTTAit + \beta2SIZEit + \beta3TANGit + \beta4LIQit + \beta5LTLTAit + \beta7 TLTAit + \beta8 ROAit + \beta9AGEit + eit \quad \ldots\ldots\ldots\ldots(1)$$

Where SLTTA is short-term liability to total assets, SIZE is assets base, TANG is tangibility of the company, LIQ is liquidity position of the company, LTLTA is long-term liability to total assets, TLTA total liability to total assets, ROA is return on assets and AGE is the age of the company.

## 4.0 RESULTS AND DISCUSSION

This section present the interpretation of the data analysed from the annual report and account of the sampled listed consumer goods companies.

Table 3 below shows a mean, minimum and maximum rate of profit increase to be experience by Nigerian listed consumer goods companies of 45% to 150% in respect of short-term liability to total assets. This implies that the rate acceptable especially with 12% spread level as indicated by standard deviation. Tangibility recorded a minimum of 60% and maximum of 150% is a welcome indicator more especially with 20% dispersion level.

In same vein, liquidity shows a minimum of 74% and maximum of 284% with dispersion of 52%. This indicates that Nigerian consumer goods companies have the capability to utilise their liquidity to their advantage and can be able to generate more revenue and profit to the benefit of their shareholders. This evidenced by the ROA of the sampled companies, which shows that for every ₦100 liquidity investment, they might realise a profit of ₦11.4 as reveals by a mean 0.11. This indicates that liquidity management has positive impact on the company's performance.

**Table 3: Summary Statistics**

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| sltta | 120 | .4547577 | .194819 | .163 | 1.497 |
| size | 120 | .1385131 | .1001068 | .007 | .597 |
| tang \| | 120 | .5932465 | .1893097 | .195 | 1.504 |
| liq \| | 120 | 1.061587 | .5220839 | .074 | 2.837 |
| ltlta \| | 120 | 7.865627 | .5668849 | 6.832 | 10.44648 |
| tlta \| | 120 | .4918823 | .1927427 | .143 | .885 |
| roa \| | 120 | .1143589 | .0943355 | -.18 | .379 |
| age \| | 120 | 1.350845 | .344266 | .477 | 1.724 |

**Source: Generated by the researcher from audited annual account and report of the LDMBs using STATA version 14.0**

Table 4 below shows the out of the regression analysis from the sampled consumer goods industry, where three regression were carry out. These are Ordinary Least Square, Fixed Effect and Random effect regression. The reason behind running the three regressions is to avoid the possible biasness of the Ordinary Least Square (Baltagi, 2005).

With 1.0000 RS and 58.2% probability index, Nigerian listed consumer goods companies have the tendency of increasing their profitability through effective management of their liquidity. While the remaining 41.8% increase in profitability might be cause by

some other factors not explain the regression function. Hence, the positive result of the tangibility, liquidity and long-term liability to total assets might serve as an evidence to accept the results.

**Table 4 Regression Result**.

| Variable | OLS | FE | RANDOM |
|---|---|---|---|
| Size | -.9998215 | -.9998215 | -.9998215 |
| tang | .9998885 | .9997206 | .9998885 |
| liq | .0001208 | .0002244 | .0001208 |
| ltlta | -.0002123 | -.0000378 | -.0002123 |
| tlta | -.0000356 | .0000222 | .0000356 |
| roa | .0004902 | .0009755 | .0004902 |
| age | -.0004897 | -.0011395 | -.0004897 |
| _cons | .0023199 | .0017916 | .0023199 |
| Prob | 0.0000 | 0.5818 | 0.5818 |
| $R^S$ | 1.0000 | 1.0000 | 1.0000 |

**Source: Generated by the researcher from audited annual account and report of the LDMBs using STATA version 14.0**

## 4.1 Bulk Density

Table 5 below shows the correlation matrix of the study variables where tangibility, long-term liability, total liability and ROA where all moderate at 0.8645, 0.3381, 0.1183 and 0.3021 respectively, whereas, size and liquidity reveals perfect strong negative relationship. The overall correlation result indicates that the variables pit the study since their relationship does not equals to zero.

**Table 5: Correlation matrix**

| | Sltta | size | tang | liq | ltlta | tlta | roa | age |
|---|---|---|---|---|---|---|---|---|
| sltta | 1.0000 | | | | | | | |
| size | -0.3110 | 1.0000 | | | | | | |
| tang | 0.8645 | 0.2088 | 1.0000 | | | | | |
| liq | -0.3885 | -0.2035 | -0.5072 | 1.0000 | | | | |
| ltlta | 0.3381 | 0.3128 | -0.1821 | 0.0414 | 1.0000 | | | |
| tlta | 0.1183 | 0.4884 | 0.1363 | -0.5837 | 0.0856 | 1.0000 | | |
| roa | 0.3021 | 0.0934 | -0.2616 | 0.2435 | 0.1313 | -0.1441 | 1.0000 | |
| age | 0.0841 | -0.0539 | 0.0583 | -0.0447 | -0.2255 | -0.0856 | 0.0668 | 1.0000 |

**Source: Generated by the researcher from audited annual account and report of the LDMBs using STATA version 14.0**

## 5.0 CONCLUSION

This paper examined empirical how liquidity impact on profitability of listed consumer goods companies in Nigeria using panel data regression. It covers the period of eight (8) years from 2012 to 2019. The study was considered important given the importance of short-term source of finance to business (Watson and Head, 2013). The findings of this study suggest that short-term finances increase firm's profitability, looking at the performance measures considered by the study. Therefore, it was recommends that listed consumer goods companies should try as much as possible to explore and effectively utilize available short-term finance at their disposal. Moreover, government should try as much as possible to reduce the cost of borrowing to enable firm's achieve a reasonable combination of debt into their capital structure and enjoy the relative tax savings advantage of the debt.

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