Liquidity Risk Management and Financial Performance: Are Consumer Goods Companies Involved?

DSunday A. Effiong, Ejabu Fidelis Enya

Abstract: The study examines the effect of liquidity risk management on the financial performance of consumer goods companies. It was aimed at establishing the extent of concern of consumer goods companies in the management of their liquid cash, cash defensive intervals, long term debts, and quick ratios, for the purpose of turning around their financial performance. Data were obtained from the annual reports and accounts of studied companies and were converted to liquidity measurement parameters. Analyses were done using multiple regression analysis methods and findings show that long term debts, quick ratios, and cash defensive intervals have a significant effect on EPS and ROA, while cash ratio and long term debts affect ROCE only. Specifically, it was empirically established that there exists a significant relationship between liquidity risk management and the financial performance of consumer goods companies. Findings further reveal that companies’ non-concerned attitude to liquidity risk management affects the financial performance of consumer goods companies significantly. The study recommends that consumer goods companies should incorporate a clear liquidity risk management approach in their strategic policy framework and communicate the same to all functional units. Because of the strategic importance of consumer goods companies to the living standards of consumers, these companies should also establish and monitor risk warning dashboards to promptly arrest and manage risk variability and risk volatility in this very important sector of the economy.

Keywords: Liquidity risk, cash ratio, cash defensive interval, risk volatility, financial performance, consumer goods companies.

1. INTRODUCTION

one of the topmost priorities of every company, be it financial or non-financial, is the adequacy in managing its assets and liabilities. Where resources are judiciously managed, investors’ confidence in the security of their investments is enhanced and goes further to shape the decision status of prospective ones. Every stakeholder has an interest in the liquidity position of a company because it plays a significant role in business success. In financial terms, liquidity connotes the amount of money that is open for investment. It helps a company to ‘ride out’ of liquidation and other accompanying problems of selling assets at distressed prices as a result of the inability to discharge obligations when necessary. In their study, [1] noted that “liquidity risk may arise due to liquidity mismatch which is measured in terms of liquidity gap. The liquidity gap is described as the difference between a bank’s assets and a bank’s liabilities.” They see “this gap to be positive or negative, with a negative gap to mean that the bank is losing net income as some proportion of the liabilities is assumed; while the positive gap is when the bank has liquid assets leftover after all of the liabilities have been recovered” [1]. This is one way of measuring the organization’s level of financial risk. Apart from the foregoing, a liquidity mismatch, liquidity risk arises due to recessionary economic conditions, causing a resource generation. This increase in the demand of depositors creating liquidity risk. This may cause the failure of a given bank to eventhentire banking systems due to the contagion effect. Liquidity risk may also arise due to the breakdown of delays in cash flows from the borrowers” [1].

Equally, “a study of liquidity provides both internal and external forecast and privilege to understand the close relationship existing in the daily operations of a business” [2]. It comprises of capital measurement of inflow and outflow of cash through the acquisition of a firm’s product, periodic payments on purchases made and collection processes, with which asset can be transformed into cash without affecting other major liquid assets [2]. Noted that “while carrying out a business transaction, the company should keep a balance between liquidity and profitability” [3]. See the management of liquidity as “a day-to-day activity in an organization that provides a thorough valuation of the coverage and timing of cash inflows and outflows over preceding periods to reduce the threat of insufficient cash. It further consists of the capacity to meet up with the financial needs of the company as they fall due and ensuring that there are adequate funds at all times”. Consumer goods companies contribute significantly to the living standards of every consumer, and in the creation of value chain and economic expansion. In a bid to ensure that shareholders’ wealth is maximized, and investor’s expectations are met, companies tend to spread their investments into several securities so as to reduce the variability of uncertainty which restricts the realization of corporate objectives. The consumer goods companies in recent years have improved significantly in their products offer, basically as a result of favourable business variables and intense competitive forces in the economy. These could also be attributed to the growing population size, culture and geographical structure that companies seemingly use in spreading their investment.

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Risks are unfavourable events that scuttle the realization of corporate objectives. They however sometimes involve some economic benefits, because the company also obtain substantial advantages by taking risk [4]. This is the most reason why successful businesses are not risk-averse, because they believe that profitability comes with risk-taking and that profitable ventures are not meant for chicken-hearted investors. Liquidity risk, however, arises from inadequate funds for ordinary operating activity which reduces the ability of companies to pay their outstanding debts as they fall due. For instance, the liquidity risk involved in cash defensive period is expressed in terms of the period in which cash is realized from revenue and operating cycle, which measures short-term liquidity by the company’s working capital turnover rate. There is therefore a need to manage liquidity risks, because a poor management approach may lead to a build-up in the liabilities to suppliers, and may result in losses and poor market performance.

The liquidity and survival of companies in the consumer goods industry are very critical, since their products are for direct consumption, and are required across all stakeholders’ groups. Consequent upon this, there could be high interest from participating stakeholders, especially shareholders whose capital constitutes a major source of funding, and as such expect a high return from their investment. Considering the demand for dividends and interest from equity and debt holders, and the intense competition in the industry, companies strive more to ensure that adequate liquidity is maintained so as to facilitate the discharge of obligations. The problem now is more on how to select the best alternative or position at which the company can manage its assets for the realization of corporate objectives of wealth creation for stakeholders’ satisfaction because the capital acquired from different sources has a diverse influence on the level of profitability. Several companies are occupied with the challenges of managing liquidity which exposes them to a high risk of credit default. In this case, suppliers of raw materials will ascertain the liquidity position of the company before credit sales are made; employees also will indicate great concern to know the company’s strength in meeting workers’ obligations and entitlements on a timely basis. Profit maximization becomes a myth when liquidity management is poor and could result in legal and technical insolvency with the consequence of low support from a stakeholder group, loss of discount offers from suppliers of raw materials, endangered debtors and creditors relationship, staff turnover and loss of assets. Against this back ground, this study seeks to investigate the extent of concern on liquidity risk management of consumer goods companies in Nigeria for the purpose of enhancing their financial performance, using the return on capital employed, return on assets and earnings per share as measurements of the financial performance of consumer goods companies in Nigeria.

II. THEORETICAL FRAMEWORK

One of the theories underpinning this study is the contingency planning theory. This theory was propounded by [5], and is considered very important in risk management. The theory has its foundation on the practical difficulties involved in total risk eradication which shows that in all standing residual risk is inevitable. Hence, certain provisions should be made to cater for exigency as events unfold. In most cases, “putting together a contrary event may collaborate to circumvent good information security techniques that would enhance confidentiality, honesty, and availability of information concerning assets”,[6]. They see “loan to assets as a leverage ratio that defines the percentage of total assets financed by liabilities or debts. There is more financial risk associated with higher ratio and as a result, it may be difficult for a highly leveraged firm to have financial flexibility”. Contingency planning theory is seen as the summation of events, controls, procedures, strategies etc. connecting to foremost occurrences and adversities. In this context, contingency planning theory has to do with making provisions for unexpected events and forecasting for the unknown. It comprises the preparation for fore most occurrences and tragedies, designing flexible strategies and arranging appropriate resources to address unforeseen events that may restrict organizations from meeting up obligations as they fall due. Another theory considered in this study is the finance theory, propounded by [7]. This theory deals with hypothetical and mathematical measurements used in regulating investment decision patterns, time value of money, fund anticipation, capital formation strategies, and financial risk management. The concept of finance theory deals with understanding the different ways in which companies and persons acquire money, allocate the money to projects with the ultimate consideration of related risk factors[7]. Conversely, despite the fact that the theory is applicable to enterprise risk management, a deeper analysis of the theory is not within the scope of this study. The theory is very important in understanding financial risk management approaches. The essential element that companies must consider when sourcing for funds either through debt or equity is the risk factor. there are some restrictive factors and benefits thereon. For equity capital, the risk factor is the volatility of earnings, and for debt capital, the risk factor is the legal arrangement between the lender and borrower. Moreover, investments in physical assets have associated risks such as the risk of wear and tear. It is therefore important for the management of companies to put in place financial risk strategies that will minimize the risk inherent in the activity of financing the business objectives. Investment in stock market shares, options and futures requires the risk manager in a company to consider the effect of volatility in their cash flow and market value. In order to safeguard against the probable risk on assets due to volatility in cash flow or market value, it may be wise to consider hedging as a risk management tool. In a nutshell, finance theory offers a wide approach of looking at risk and the financial risk management strategies to be adopted. Hence this study is anchored on the finance theory.

A. Liquidity Risk Management and Performance.

Liquidity risk commonly refers to a low financial ability of a company to meet its...
commitments as they remain outstanding or become due, without having an adverse effect on their operations. Managing liquidity enables a company to meet its obligations and increase the viability position through a reduction in the probability of adverse financial misfortune.[8] observed that liquidity management is principally a cost-benefit trade-off, in that financial institution in its analytical process will evaluate their funding capacity provided the prevailing market prices will not hinder their ability to pay, or the decision to sell its assets. They further contended that companies in their capacity can hold stock of liquid assets so as to enhance adequate liquidity, although at the expense of little yields. The availability of liquid assets attracts opportunity cost that the company will stand to benefit, as the return on asset is lesser than the productive return on investment, but transaction cost may exist as the company engages in the sale or purchase of financial assets which are tax disadvantageous. There are few studies that investigate the effect of liquidity on financial performance. Most of the studies focus on return on asset (ROA) and return on capital employed (ROCE) as performance determinant without due consideration to earnings per share given the structure of the companies involved in their investigations. The empirical gaps of the various studies below provide the foundation upon which this study rolled. [9], in their study established that “operating income to total asset is positively correlated with ROA at the three periods employed in the study. And it showed a positively significantly correlation with ROE except during pre-crisis period, it recorded an insignificant correlation with ROE in the current study. They recognized that short term funding and the percentage of liquid assets to customers are positively related to ROA”. In their studies, [10] also found a positive significant correlation amongst liquidity risk and bank profitability indices. They further conclude that there is a two-way association among liquidity and profitability, and the viability in the deposit money banks was said to have a significant influence on liquidity. Mixed reactions, in both positive and negative relationships, were found in some results, [11] stated that liquidity risk is absolutely correlated to the net interest margin of the market-based financial system, thus indicating that banks with a high level of illiquid assets receive higher interest income. Contradicting with the above assertion, they further maintained that liquidity risk exerted an adverse correlation on average asset return and somehow connected to average equity return. It was found out in the study that banks play a significant role in financing decision, therefore liquidity risk and bank performance were positively correlated. The measurability of a company’s liquidity is determined by the capacity to make funds available for unexpected cash obligations and an increase in assets value without incurring unacceptable losses.[8] Adequate management of liquidity is one main concern of the company and is connected with the ability to increase assets and discharge any obligation as they may occur. Liquidity and company solvency are like a two-way sword; their adequate management has the tendency of decreasing the probability of companies becoming solvent and bankrupt. [12] maintained that judicious management of liquidity enhances healthy growth in both financial and operations, thereby reducing the overall risk possibility in the book value of the asset. Liquidity risk arises from maturity disparities whereby liabilities are said to have a shorter maturity period than assets. In their study, [13] reported that “in the process of doing business, it is inevitable that the firm will be faced with unexpected and very often unpleasant surprises that threaten to undercut or, even worse, to destroy the business”. To them “the essence of risk and how a firm responds to it will determine whether it will survive and succeed or not. Risk management is a concept that has been used since the beginnings of humankind, it is an evolving concept”. “The roots of risk management can be found in the corporate insurance industry. The risk has long been studied especially in the last years. It is one of those concepts that do not have a universal definition. Every scholar has a different approach to risk”, [13], [14] listed in their work a framework for the management of liquidity risk to include: to determine and manage disposable funding requirements, and market access and emergency plans. They further maintained that companies should, at regular intervals, estimate the possibilities of future cash flows rather than concentrating only on written contract periods within which liquidity will roll forwards or backward. However, companies with enough liquidity often have a little percentage of its assets in long term loans and a larger percentage of its assets in short term investments that can easily be turned into cash. Companies with highly liquid assets could be interpreted to be lacking profitable projects to invest their idle capital [15].
Liquidity Risk Management and Financial Performance: Are Consumer Goods Companies Involved?

Fig. 1 is a graphical representation of the association between liquidity risk and risk appetite, on one hand, and liquidity risk and financial performance, on the other hand. The graph depicts four hypothetical companies engaging in risk management and financial performance, on a scale of zero to twelve. The graph shows that every company is exposed to liquidity risks, but the difference between one company and the other is in the company’s appetite for risks. Just like any other type of risk, liquidity risk management appetite will naturally have a positive or negative influence on the financial performance of the firm, depending on the level of risk management effectiveness. From the graph, company four is operating with the highest liquidity risk followed by company one. Company three has the next highest risk after company one, while company two has the least liquidity risk exposure. Worthy of note from the graph is the fact that Company two, with the lowest liquidity risk exposure, has the poorest liquidity management attitude and thus ends the least performance returns. Company four with the highest risk exposure has an effective risk management attitude resulting in the highest performance returns in the industry. Companies three and one earn performance returns according to their degree of effectiveness in managing their liquidity risk exposures. This confirms that the underlying factor in improving or reducing financial performance is the level of effectiveness in the management of existing risks in a given industry.

B. Risk Management

Risk management contributes majorly to business growth and project successes, because it proactively addresses uncertainties in a manner that reduces threat, increases opportunities and enhances value creation through the actualization of basic objectives. [16] see risk management to “include several related actions involving risk: planning, assessment (identification and analysis), handling, and monitoring”. They suggest that “risk planning is a process of developing and documenting the strategy and methods for identifying and tracking risk issues, developing risk handling plans, performing continuous risk analysis to know how risks have changed, and assigning adequate resources”. More often, managing risk serves as a priceless device for handling uncertainty related to business factors. Business enterprises have directly or indirectly carried out risk management practices in many ways. “Generally, risk management is not a new concept in the business world; it has been in existence just as old as the business itself, with several techniques, unknowingly in the application by different corporate entities. These are quality control measures, alternative risk financing, hazard education, insurance and other safety measures [16].
From a traditional perspective, they view risk management “as a sequence of distinct and unconnected risk components where risk is individually separated, managed and characterized. Managing risk holistically differs largely from organization product offer and services rendering”, [16]. In practice, most firms choose to combined risks for effective management while some disintegrate them, just like in the traditional method, so as to enable each strategic business unit to design a sound template for effective management. The challenge in the Nigerian system is that several organizations have been disadvantaged by shortcomings in traditional methods of managing risk, as it is hardly carried out in a logical and unified way across organizations. These approaches to risk management are constricted on threats while undermining the overwhelming opportunities surrounding the firm. Risk management does not suggest avoiding risk nor does it mean eliminating risk entirely, but it is connected with a technique of exploiting opportunities and reducing threats from business operations. In doing this, organizations need to establish a clear strategy to manage various risks, develop a unified risk culture across the organization, design a risk policy and structure, and provide assurance function for information technology, health/safety, and ascertain the capability of internal audit functions. In both developed and developing countries, a number of frameworks have been designed in recent times to promote risk management. Generally, the main stages of risk management are: identifying the risk, analysis the risk context, risk evaluation, risk treatment, monitoring and review, and communication/consulting. This is demonstrated in Fig. II.

Fig. II: Risk management framework.

Firms are exposed to different types of risks, hence their approach to risk management differs. Similarly, the degree of risk management among business enterprises is subject to corporate risk culture and risk appetite. The fundamental difference is that corporate risk culture is a chosen response while corporate risk appetite exists as a tendency independent of human choice [17]. [18] see “the issue of credit risks to have gained increasing attention in the last few decades. Amounts of bad loans are alarmingly increasing in not only the developing and underdeveloped countries but also in developed countries. Banks” lending policy could have a crucial influence on non-performing loans”. Risk management can support business expectations and proactively help in overcoming the likelihood of business failures [19]. In their contribution, [20] confirm that “in the manufacturing sector today, human capital is still essential for most factories to carry out a variety of manual operations, in spite of the rapid advancement of automation technology and robotics. A futuristic vision of unmanned manufacturing is forbiddingly expensive, because all its hardware components need to be computer controlled so as to freely communicate with each other; and yet, most of the outcomes are not promising”. “By and large, factories equipped with relatively simple machinery controls will require continuous attendance of human operators; for example, textile mills, leather products, and medical appliances. With limited capital investments in production equipment, the main budget of their fixed costs lies in the workforce size”, [20]. In their study, [21]
“revealed that there is a positive and significant relationship between liquidity risk and bank failure, implying that poor liquidity position increased the likelihood of failure. The study also found a positive and significant relationship between bank failure and asset quality and earnings; indicating that they increased the likelihood of failure”. “Four causes of naïve approach to risk management in most firms, to include: lack of top management cooperation with risk management function, splitting of risk management function amongst different persons within the organization, looking at risk management from the historical perspective and absence of alliance among corporate strategy. Effective risk management, particularly in an industry such as consumer goods companies, will promote competitive advantage and enhance stability in adverse situations”, [22].

III. METHODOLOGY

All the ten consumer goods companies quoted on the floor of the Nigerian Stock Exchange from 2013 to 2017 financial years were investigated. This gives a total of fifty (50) observations. These companies reported their financials in line with the global accounting standards, and all financial information required for computation of essential ratios, for the assessment of liquidity management and other variables, were disclosed. Data for the study were obtained from published financial statements of the companies. In this analysis, the ordinary least square regression method was employed to evaluate the relationship existing between liquidity risk management and financial performance. Financial performance is measured by three proxies, ROCE, ROA, and EPS. The return on capital employed (ROCE) is calculated as net operating profit over the total value of assets less current liabilities. That is, ROCE = [(NOP/TA-CL)]; Return on assets (ROA) is calculated as net operating profit over total assets. That is, ROA = [(NOP/TA)], and earnings per share (EPS) was employed to ascertain the variability of earnings available to equity shareholders given the risk exposure in the industry. It is calculated as earnings before interest and tax over the number of ordinary shares issued. EPS = ([NP/NOSI]). The independent variable is the liquidity risk exposure calculated using the financial ratios often referred to as liquidity ratios. This group of ratios measures the ability of the firm to meet its current obligations as they fall due. They are measured by cash ratio (CR) which reveals the amount of immediate liquid assets available against each kobo of current assets. It is measured as the summation of cash, cash equivalents and marketable securities over current assets of the same period. This is calculated as: CR = [CCE+MKTS/CA]. Cash defensive interval (CDI) reveals the conservative approach to maintaining liquidity. It is measured as cash flow from operating activity over average operating cash expenses. This is given as CDI = [CoA/AVOEXP]. Quick ratio (QR) was also used in the study to show the true position of the company in meeting its obligation from its current asset without having to sell inventory. It is given as: QR = [CA-

INV/CL], and long term debt retirement (LTDBT). Thus, the models are specified as follows:

\[ FPERF = f [LIQRK] \]

\[ FPERF = \beta_0 + \beta_1 CR_1 + \beta_2 CDI_2 + \beta_3 LTDBT_3 + \beta_4 QAR_4 + \mu \]

\[ ROCE = \beta_0 + \beta_1 CR_1 + \beta_2 CDI_2 + \beta_3 LTDBT_3 + \beta_4 QAR_4 + \mu \]

\[ ROA = \beta_0 + \beta_1 CR_1 + \beta_2 CDI_2 + \beta_3 LTDBT_3 + \beta_4 QAR_4 + \mu \]

\[ EPS = \beta_0 + \beta_1 CR_1 + \beta_2 CDI_2 + \beta_3 LTDBT_3 + \beta_4 QAR_4 + \mu \]

Where: FPERF = Financial performance; ROCE = Return on capital employed; ROA = Return on asset; EPS = Earnings per share; CR = Cash ratio; CDI = Cash defensive interval; QAR = Quick asset ratio; LTDBT = Long term debt.

Fig. III: Graphical relationship between CR, CDI, QAR, LTDBT and ROCE, ROA, EPS.
The unstandardized coefficients indicate that a percentage rise in cash ratio, cash defensive interval, and the quick ratio will result in a 2.4%, 1.8%, and 1.2% rise in ROCE respectively, of the studied quoted consumer goods companies in Nigeria; while a percentage increase in long term debts results in a 165.8 percent decrease in ROCE of the studied companies. From this result, the consumer goods companies face a very high and significant risk on all long term debts, as these debts significant sweep returns on capital employed by 165.8% from a percentage increase in long term debts. The p-value for CR confirms that there exists a significant relationship between cash ratio and ROCE of the studied consumer goods companies. This indicates that the cash ratio is capable of predicting the outcome of ROCE. The null hypothesis is therefore rejected, and the alternative upheld. This result agrees with the findings of [4] that the current ratio has a significant positive relationship with profitability. The p-value for CDI indicates an insignificant relationship between cash defensive intervals and ROCE of the studied consumer goods companies. It shows that CDI may be an inadequate predictor of ROCE of consumer goods companies in Nigeria. The QAR as shown in the result does not adequately predict the behavior of ROCE of the studied consumer goods companies. The result further reveals that long term debts did not adequately predict the outcome of ROCE for the companies studied, and thus an inverse insignificant relationship. The value of .053 described the companies’ debts relative to their net worth. The long term debt ratio here indicates a major risk loitering in the books and could portend a significant liquidity crisis in the future which is capable of affecting the return on capital invested significantly. The R square and Adjusted R square values are important indicators for interpreting changes in the studied variables. As revealed in the result, the value of R Square is 0.71 and the Adjusted R square is 0.52. The result reveals that the variables in the regression line, made up of long term debts, quick ratio, cash defensive interval, and cash ratio explains a 71% variation in return on capital employed (ROCE). The predictors are statistically significant; leaving only about 29% changeability in firms’ financial performance to other factors not considered in the model. The adjusted $r^2$ of 0.316 reveals that the regression line perfectly captures 31.6% of the changes in returns on capital employed by the studied consumer companies. In other words, 31.6% of the four predictors have a direct and actual influence on ROCE. The Durbin-Watson statistic of 2.103 indicates that there is no auto-correlation between the independent variables. The F-statistic of the estimated coefficient of liquidity risk was used to test the hypothesis at 0.05 for a 95% level of confidence. The observed F-statistic was 1.955 and the statistical table value is 2.704 at 0.05 percent confidence interval. Given that the calculated value of 1.955 is less than the tabulated value of 2.704 with the degree of freedom $n – 2 = 50 - 2 = 48$ at 0.05 percent level of significance, the null hypothesis is therefore accepted and the alternative rejected.

### Table-I: Regression results of the effect of liquidity risk on ROCE of consumer goods companies in Nigeria.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Std Error</th>
<th>t-Statistics</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>1.102</td>
<td>.804</td>
<td>1.372</td>
<td>0.048</td>
</tr>
<tr>
<td>CR</td>
<td>.024</td>
<td>.065</td>
<td>.368</td>
<td>0.733</td>
</tr>
<tr>
<td>CDI</td>
<td>.018</td>
<td>.051</td>
<td>.344</td>
<td>0.025</td>
</tr>
<tr>
<td>QAR</td>
<td>.012</td>
<td>.012</td>
<td>.193</td>
<td>.848</td>
</tr>
<tr>
<td>LTDBT</td>
<td>-1.658</td>
<td>.007</td>
<td>.624</td>
<td>0.053</td>
</tr>
</tbody>
</table>

$R^2 = 0.71$

$R^2 Adj = 0.316$

F-stat = 1.955

DW = 2.103

Source: Authors’ compilation.

### IV. RESULTS AND DISCUSSION OF FINDINGS

The unstandardized coefficients indicate that a percentage rise in cash ratio, cash defensive interval, and the quick ratio will result in a 2.4%, 1.8%, and 1.2% rise in ROCE respectively, of the studied quoted consumer goods companies in Nigeria; while a percentage increase in long term debts results in a 165.8 percent decrease in ROCE of the studied companies. From this result, the consumer goods companies face a very high and significant risk on all long term debts, as these debts significant sweep returns on capital employed by 165.8% from a percentage increase in long term debts. The p-value for CR confirms that there exists a significant relationship between cash ratio and ROCE of the studied consumer goods companies. This indicates that the cash ratio is capable of predicting the outcome of ROCE. The null hypothesis is therefore rejected, and the alternative upheld. This result agrees with the findings of [4] that the current ratio has a significant positive relationship with profitability. The p-value for CDI indicates an insignificant relationship between cash defensive intervals and ROCE of the studied consumer goods companies. It shows that CDI may be an inadequate predictor of ROCE of consumer goods companies in Nigeria. The QAR as shown in the result does not adequately predict the behavior of ROCE of the studied consumer goods companies. The result further reveals that long term debts did not adequately predict the outcome of ROCE for the companies studied, and thus an inverse insignificant relationship. The value of .053 described the companies’ debts relative to their net worth. The long term debt ratio here indicates a major risk loitering in the books and could portend a significant liquidity crisis in the future which is capable of affecting the return on capital invested significantly. The R square and Adjusted R square values are important indicators for interpreting changes in the studied variables. As revealed in the result, the value of R Square is 0.71 and the Adjusted R square is 0.52. The result reveals that the variables in the regression line, made up of long term debts, quick ratio, cash defensive interval, and cash ratio explains a 71% variation in return on capital employed (ROCE). The predictors are statistically significant; leaving only about 29% changeability in firms’ financial performance to other factors not considered in the model. The adjusted $r^2$ of 0.316 reveals that the regression line perfectly captures 31.6% of the changes in returns on capital employed by the studied consumer companies. In other words, 31.6% of the four predictors have a direct and actual influence on ROCE. The Durbin-Watson statistic of 2.103 indicates that there is no auto-correlation between the independent variables. The F-statistic of the estimated coefficient of liquidity risk was used to test the hypothesis at 0.05 for a 95% level of confidence. The observed F-statistic was 1.955 and the statistical table value is 2.704 at 0.05 percent confidence interval. Given that the calculated value of 1.955 is less than the tabulated value of 2.704 with the degree of freedom $n – 2 = 50 - 2 = 48$ at 0.05 percent level of significance, the null hypothesis is therefore accepted and the alternative rejected.
Liquidity Risk Management and Financial Performance: Are Consumer Goods Companies Involved?

Table II: Regression results of the effect of liquidity risk on ROA of quoted consumer goods companies in Nigeria.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistics</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>.490</td>
<td>.156</td>
<td>3.145</td>
<td>0.003</td>
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<tr>
<td>CR</td>
<td>-0.007</td>
<td>.013</td>
<td>-0.563</td>
<td>0.577</td>
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<tr>
<td>CDI</td>
<td>-0.003</td>
<td>.010</td>
<td>-3.32</td>
<td>0.054</td>
</tr>
<tr>
<td>QAR</td>
<td>.001</td>
<td>.002</td>
<td>.686</td>
<td>0.494</td>
</tr>
<tr>
<td>LTDBT</td>
<td>-5.252</td>
<td>.015</td>
<td>-1.026</td>
<td>.311</td>
</tr>
</tbody>
</table>

\[ R^2 = 0.045 \]
\[ R^2_{Adj} = 0.055 \]
\[ F-stat = 2.984 \]
\[ DW = 1.276 \]

Source: Authors’ compilation.

This means that there is an insignificant relationship between liquidity risks and return on capital employed of the studied consumer goods companies in Nigeria, for the years considered. The regression results indicate that an increase in cash ratio, cash defensive interval, and long term debts respectively, by 1% will lead to a decrease in ROA by 0.7%, 0.3%, and 525.2%, while an increase in quick ratio (QR) by 1% will motivate a significant increase in ROA by 0.1%. The P-value of CR at 0.577 is greater than the threshold at 5% significant level, and indicates that cash ratio will insignificantly predict the outcome of ROA of the studied consumer goods companies. The p-values for CDI and LTDBT show the same trend of insignificant predictive powers of cash defensive interval and long term debts on ROA, with values of 0.054 and 0.311 respectively. The two values are above the threshold at 5% level of significance. There is however a significant relationship between QAR and ROA of the investigated consumer goods companies. The return on assets (ROA) provides stockholders an insight on how effective a company is converting its investments into income; the result here further confirms the alarming risk level of long-term debts to consumer goods companies in Nigeria, in relation to ROA. This is in agreement with the assertion of [15] that liquidity risk plays a significant role in asset valuation because the investors highly consider whether the assets are going to be sold or there is a market for them. The model summary investigates the effects of cash defensive interval, cash ratio management, long term loan and quick ratio (proxies of liquidity risk) on return on assets of the studied companies. As revealed in the data analysis, the R Square is 0.45 and the Adjusted R square is 0.055. The result means that the independent variables, (long term debt, quick ratio, cash defensive interval, and cash ratio) together explain up to 45% variation in return on assets. The predictors are statistically substantial, leaving about 55% changeability in firm performance to other factors not considered in the model. The Durbin-Watson statistic indicates a positive auto-correlation amongst the independent variables. These results imply the existence of a positive strong interaction amongst liquidity risk management proxies. The F-statistic of the estimated coefficient of liquidity risks management and ROA was observed to be 2.984 while the critical value was 2.704 at 0.05 percent confidence interval. Given that the calculated value of 2.984 is greater than the tabulated value of 2.704 with the degree of freedom n – 2 (50-)=48 at 0.05 percent level of significance, the null hypothesis is rejected and the alternative accepted. The study therefore concludes that there exists a significant relationship between liquidity risks management proxies and return on assets of consumer goods companies in Nigeria.
Table-III: Regression result on the effect of liquidity risk management on the EPS of quoted consumer goods companies in Nigeria

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistics</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>110.26</td>
<td>.187</td>
<td>1.980</td>
<td>0.055</td>
</tr>
<tr>
<td>CR</td>
<td>-2.775</td>
<td>4.537</td>
<td>-.612</td>
<td>0.554</td>
</tr>
<tr>
<td>CDI</td>
<td>-1.699</td>
<td>3.553</td>
<td>-.478</td>
<td>0.035</td>
</tr>
<tr>
<td>QAR</td>
<td>-1.745</td>
<td>.737</td>
<td>-2.367</td>
<td>0.023</td>
</tr>
<tr>
<td>LTDBT</td>
<td>8.371</td>
<td>.812</td>
<td>.457</td>
<td>.506</td>
</tr>
</tbody>
</table>

R² = 0.047
R²Adj = 0.053
F-stat = 2.752
DW = 2.752

Source: Authors’ compilation from regression result

The results of the regression summary indicate inverse relationships between cash ratio, cash defensive interval and quick ratio, and earnings per share of the studied consumer goods companies. A percentage increase in CR, CDI, and QAR result in a 277.5%, 169.9% and 174.5% reduction in earnings per share respectively, for the companies studied and the years considered. These results indicate that cash ratio, cash defensive interval and the quick ratio of the companies were poor influencers of EPS; hence conservative approaches to liquidity management were injurious to performance and earnings per share within the period. The result is in line with the findings of [23] that the application of a conservative investment policy and aggressive financing policy has a negative impact on a firm’s profitability. The results also agreed with the assertion of [24] that critical implication of liquidity to a company is constant growth and endogenous factors; what is responsible for such assessment is the company’s position in the market. The result further reveals that long term debt (LTDBT) significantly improves earnings per share (EPS) by 83.7%, from a percentage change in LTDBT. Statistically, these two measures of liquidity management affirmed that the companies are viable to meeting their critical commitments as they fall due and shareholders’ wealth can be increased in spite of the weak conservative approach to liquidity management. The results affirmed the conclusion of [13], that a company before paying dividends must consider its liquidity position irrespective of its high profits. They also maintained that profits should not be likened to cash; therefore dividends payment must reflect not just the company’s profits but also its ability to pay. The regression result revealed that R Square is 0.047 and the Adjusted R square is 0.053. This means that the variables(long term debt, quick ratio, cash defensive interval, and cash ratio) explain 4.7% variation on earnings per share. The predictors are statistically insignificant; leaving a whopping 95.3% variability in EPS to other factors not considered in the model. This result collaborates the result of the unstandardized coefficients, earlier evaluated, that CR, CDI, QAR and LTDBT are not good predictors of EPS. In other words, liquidity indicators are not strong and significant predictors of earnings per share. Other factors are far better predictors of EPS than liquidity indicators. The Durbin-Watson statistic also indicated a positive auto-correlation amongst the variables. The probability values for CR and LTDBT provide sufficient reasons to accept the null hypotheses, that there is no significant relationship between cash ratio/long term debts and earnings per share of the studied consumer goods companies. The results however affirm a significant relationship between cash defensive interval/quick ratio and earnings per share of the studied companies, with p-values of 0.035 and 0.023, against 0.05 significant levels for CDI and QAR respectively. The F-statistic estimator was significant at 2.752 at a significant level of 5%. Given that the calculated value is greater than the tabulated value at 48 (50-2) degree of freedom, the null hypothesis is rejected and the alternative accepted. The study, therefore, concluded that there exists a significant relationship between liquidity risk management and earnings per share of consumer goods companies in Nigeria.

V. CONCLUSION AND RECOMMENDATIONS

Liquidity is an essential tool for the implementation of the company strategic policy, for the purpose of enhancing the going concern position of the company. Effective liquidity management engenders the
Liquidity Risk Management and Financial Performance: Are Consumer Goods Companies Involved?

Authors: 


REFERENCES


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