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LIQUIDITY AND PERFORMANCE OF LISTED MANUFACTURING COMPANIES IN NIGERIA

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Abstract

To achieve profitability, business firms must maintain adequate liquidity as failure to meet their obligation as and when due results in bad credit rating by short term creditors. This study examined the effect of liquidity on the performance of listed manufacturing companies in Nigeria. The study employed an explanatory research design to assess the relationship using data obtained from audited financial statements of 16 manufacturing firms in the consumer goods sector from 2009-2018. The collected data were analysed using SPSS and E-View. The study employed panel multiple regression to analyse the data. The research found out that the quick ratio has a significant adverse effect on the performance of listed manufacturing firms. In contrast, current ratio and cash conversion cycle have no considerable impact. The study concludes that liquidity has a substantial effect on the performance of manufacturing companies

in Nigeria. Still, in no small extent, the manufacturing firms in Nigeria did not profitably maintain their liquidity levels. The study recommends that manufacturing firms should put down, and follow strict adherence to policies and practices that help the firm to maintain a proper balance between their liquidity position and profitability.
Keywords: Liquidity; Performance; Current ratio; Quick ratio; Cash Conversion ratio; Manufacturing

INTRODUCTION

Liquidity and profitability of financial institutions are two vital concepts that have attracted the attention of researchers, as many empirical studies contradict the assumed inverse relationship between the two concepts (Charmler, Musah, Akomeah, & Gakpetor, 2018). Extant studies ascribe the global financial crisis of 2009/10 to liquidity crunch. Still, most of them used theoretical approached, only a few supported their claim by empirical, and those few also employed controversial metrics for profitability (Marozva, 2015). Profitability is a significant factor in the going concern of a business, and managers strive to achieve a reasonable level of profitability to maximise their shareholders' wealth.

Firms across all sectors and nations have failed due to improper liquidity management. Many of the failed companies always experience difficulties in meeting their short-term obligations, those that managed their liquidity problems in prudent manners survived while those who did not manage it well eventually liquidated. Liquidation occurs as a result of persistent illiquidity and inability to make adequate profit. Often times, during favourable economic conditions, many firms neglect working capital management, which is very fundamental to continuous cash flow, liquidity and profitability.

Insufficient working capital makes it difficult for firms to expand and trade profitably. Liquidity problem has forced some Nigerian firms to reduce their workforce leading to increase in unemployment market; Ajaokuta steel complex reduced their staff from 5000 to 1000 in 2007 (Duru, Ekwe, & Eje, 2014). Similarly, liquidity problem has made it difficult for some manufacturing firms in Nigeria to pay dividends; Champion Breweries has not paid a dividend since 1988, and likewise, Golden Breweries since 1997 (Duru et al., 2014). This study, therefore, seeks to find out the relationship between liquidity and profitability manufacturing companies in the Nigerian Stock Exchange.

However, existing studies have cantered on financial institutions and financial aspect of liquidity, whereas, much more work is needed in other sectors and the operational dimension of liquidity such as cash conversion cycle (Demirgünes, 2016). Liquidity plays a crucial role in firms

sustainability as it smoothens firms' operation, and it is an indicator of firms' ability to pay back their short-term liabilities (Yameen, Farhan, & Tabash, 2019).

LITERATURE REVIEW

Conceptual Review

This section consists of clarifications on the critical concepts of the study

Liquidity

Liquidity is the ability of a firm to meet short term financial obligations via conversion of current asset into into cash without suffering any loss (Akenga, 2017). Liquidity in companies implies dimensions; quantitative and qualitative. The quantitative aspect includes the ability of a firm to meet all present and potential demands on cash in a manner that minimise cost and maximise the value of the business. Liquidity of a firm can be measured via the current ratio, quick ratio and cash conversion cycle.

Current Ratio

This ratio which represents the ratio of current assets to current liabilities measures the company's ability to meet its short-term obligations such as trade creditors. A liquidity ratio that is greater than one implies the firms' greater capacity to meet short term obligations. However, a current ratio that is below one implies liquidity deficit which could lead to a decline in the company's energy, thus can affect profitability. If the ratio is equal to 1, it means that current assets equal to current liabilities. (Robinson, Henry, Pirie, & Broihahn, 2015)

$$Current\ Ratio = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Quick Asset Ratio

This ratio uses only the most liquid of current assets to current liabilities. If this ratio is 2:1, it implies the high liquidity of the company. As a result of the difficulty of cash conversion, this ratio removes prepaid expenses and inventory from current assets(Sinha, 2012).

$$Quick\ Ratio = \frac{\text{Current Assets} - (\text{Inventories} + \text{Prepayments})}{\text{Current Liabilities}}$$

Cash Conversion Cycle (CCC)

Cash conversion cycle may be negative or positive. A positive value implies the length of days a firm must borrow or tie up capital while still expecting payment from customers. However, a negative value shows the number of days a firm has received cash from sales before paying the

suppliers (Hutchison, Farris, & Anders, 2007). Companies desire to have low CCC because it indicates efficiency in cash management.

The cash conversion cycle is calculated thus:

$$CCC = \text{Days of Sales Outstanding} + \text{Days of Sales in Inventory} - \text{Days of Payables Outstanding}$$

In the formula above, the three variables to which CCC is dependent are defined as follows:

$$Days\ of\ Sales\ Outstanding = \frac{\text{Account Receivables}}{\text{Sales}/365\ \text{days}}$$

$$Days\ of\ Sales\ in\ Inventory = \frac{\text{Inventories}}{\text{Cost of Sales}/365\ \text{days}}$$

$$Days\ of\ Payables\ Outstanding = \frac{\text{Account Payables}}{\text{Cost of Goods Sold}/365\ \text{days}}$$

Performance

Performance is a measure of organisations' results in terms of their operations. This measure can be in financial or nonfinancial metrics. Financial performance refers to monetary measurement of results of firm's policies, and procedures over a period of usually by computing Return on Assets or Return on Equity(Akenga, 2017). A company should earn profit to survive and grow over a long period. Profitability is crucial to a business firm, but it should not be pursued at the expense of other stakeholders' interests. The profitability ratios are calculated to measure the operating efficiency of the company. Some of the profitability ratios include the following:

Return on Investment (ROI)

The term investment may refer to total assets or net assets. The funds employed in net assets are known as capital employed. Net assets equal net fixed assets plus current assets minus current liabilities, excluding bank loan. The conventional approach of calculating Return on investment is to divide profit after tax (PAT) by investment. Investment refers to a pool of funds supplied by shareholders and lenders, while PAT represents residue income of shareholders.

The formula of ROI is stated thus:

$$ROI = \frac{\text{Profit after taxes}}{\text{total ASSETS}}$$

Return on Equity (ROE)

Ordinary shareholders are as the owners of the business do not enjoy fixed dividend, but are entitled to the residue profits. A return on shareholder's equity is calculated to see the profitability of owners' investment. The ROE is net profit after taxes divided by shareholders' equity which is given by net worth.

The formula of ROE is stated thus:

$$ROE = \frac{\text{Profit after taxes}}{\text{Net Worth(Equity)}}$$

Return on Assets (ROA)

Return on Assets expresses the net income earned by a company as a percentage of the total assets available for use by the company. ROA suggests that companies with higher amounts of assets should be able to earn higher levels of income. ROA measures management's ability to make a return on the firm's resources (assets). ROA is computed by dividing net income plus interest expense by the company's average investment in asset during the year. The formula of ROA is stated thus:

$$ROA = \frac{\text{Net income after tax+Interest expense}}{\text{Average total Assets during the year}}$$

Theoretical Review

Trade-off Theory

The trade-off theory is based on the work of economists Modigliani and Miller in the 1950s (Cekrezi, 2013). It shows that companies target the most effective level of liquidity to stabilise the gain and cost of retaining cash. The cost of keeping cash consists of rate of Return of the total assets due to liquidity top class and probably tax downside. Holding cash has dual benefits: First is the saving of transaction cost to raise finances so that firms do not need to liquidate assets to make payments. Secondly, firms can use the current asset to finance its activities and investment in the absence of other investment resources or if the values of other investments are shallow.

The theory explains that firms with high leverage draw excessive price of servicing the debt, thereby affecting its profitability and it will become difficult for them to source for funds through different resources (Jenson, 1986). The concept explains variation in capital structures among industries. In contrast, it cannot explain the reasons for the decrease in debt ratio among profitable corporations inside the enterprise (Asete & Kung'u, 2018). Trade-off theory explains why worthwhile firms enjoy a giant tax shield and have more significant debt capital.

Agency Theory

This theory was developed in 1986 (Jenson & Meckling, 1976). They argued that the governance of a firm is premised on the conflict of interest between the owners, management, and significant providers of debt capital as each of the three groups has different interests and objectives.

Separation of ownership from management in the modern business world generates conflict between the two parties. Another agency problem source is the presence of free excess cash, which is beyond that required for financing projects of value (Jenson, 1986). He argued that somehow, free cash problem could be controlled by increasing the managers' stake in the business or by increasing debt in the capital structure so that the availability of free cash can be reduced.

Empirical Review

In India, the analysis of data collected from 82 pharmaceutical firms for ten years from 2008 to 2017 reveals that current liquidity ratio and quick ratio have a positive and significant effect on the performance (Return on Asset)(Yameen et al., 2019). Extant study in India shows that liquidity, profitability and solvency of a manufacturing firm were satisfactory(Maheswari, 2015).

However, the analysis of South African banks using Autoregressive Distributed Lag and Ordinary least square shows a significant negative nexus between the liquidity and performance(Marozva, 2015). However, the author used a net interest margin to proxy profitability. Net profit margin is a very controversial measure of profitability, particularly when it is to be related to liquidity. Similarly, analysis of the relationship between liquidity and performance of Deposit money banks in Nigeria for five years reveals that liquidity mechanisms do not have a significant relationship with profitability both in the short run and long run(Obi-Nwosu, Okaro, Ogbonna, & Atsanan, 2017). A period of 5 years also may be too small to get valid results.

Another study from Nigeria investigated the relationship between liquidity and corporate performance covering 20 years 1984 -2014 which is broader than the timeframe covered by (Obi-Nwosu et al., 2017). The study proxied liquidity by Cash reserve ratio, Liquidity ratio and loan to deposit ratio, and proxied performance by Shareholders' fund. The study found out that a significant negative short-term relationship exists between cash reserve ratio and performance, but an insignificant positive relationship between Loan to D Moroccan bank's performance is mainly determined by liquidity ratio.

Patjoshi (2016) examined liquidity management and financial performance of selected steel companies in India from 2010 to 2014 inclusive. The study measured liquidity in different dimensions comprising current ratio, liquid ratio, and inventory turnover ratio. At the same time, it proxied profitability by operating profit margin, net profit margin, return on total asset and return on investment. The correlation and regression results show that liquidity has a significant effect on performance.

Njure (2014) assessed the relationship between liquidity and profitability of nonfinancial companies listed in the Nairobi stock exchange. The ROA was used as a proxy for companies' profitability and the companies' liquidity was measured using the current ratio, quick ratio and the absolute liquid ratio. Correlation results reveal a significant weak positive relationship between liquidity and profitability among the listed nonfinancial companies in Kenya.

Likewise, Jayarathne (2014) examined the impact of working capital management on profitability of listed companies in Sri Lanka between 2008-2012. The result indicated that the profitability had an inverse relationship with the account receivable period, inventory turnover period, and cash conversion cycle. In contrast, it has a positive relationship with account payable period.

Empirical studies show mixed results as some show a negative relationship and others show positive or no connection. Moreover, the existing literature focused on the banking sector, whereas liquidity also affects other sectors. Given the inconsistencies of previous studies, the researcher has found the need to study the effect of liquidity on the financial performance of listed manufacturing companies in Nigeria.

METHODOLOGY

Research Design

Kothari and Garg (2019) explain that the "research design focuses on the structure of an enquiry, which leads to the minimisation of the chance of drawing the wrong casual inferences from the data". This study employed an explanatory research design to explain the effect of liquidity on performance. The population of this study is the consumer sector of manufacturing firms in Nigeria, which consists of twenty (20) listed manufacturing companies in Nigeria gotten from the Nigeria Stock Exchange. Only 16 listed consumer sector manufacturing firms were included in the study because of the availability of data. This secondary data was collected from the audited financial statements of listed manufacturing firms in Nigeria.

Data Analysis Technique

The study employed panel multiple regression to analyse the data on E-view. Diagnostic tests including normality, autocorrelation and linearity were first of all carried out before proceeding to regression analysis

Model Specifications

This research adopts the simple linear regression method. The specific objectives are expressed as:

$ROE = f(CR)$……. (i)

$ROE = \beta_0 \ + \ \beta_1 CR + \beta 2 \ QR + \beta 3 CCC \varepsilon$ ……. (ii)

Where:

ROE = Return On Equity

CR = Current Ratio

QR = Quick Ratio

CCC = Cash Conversion Cycle

β_0 = Intercept

β_1 = Co-efficient of Current Ratio,

$\beta 2$ =Quick Ratio

$\beta 3$ = Cash Conversion Cycle.

ε = Error term

Description and Measurement of Variable

The variables of the study were measured as provided in Table 1.

Table 1: Measurement of Variables

Variable	Type	Measurement
Return on Equity (ROE)	Dependent	(ICAN, 2014)
Current Ratio	Independent	(Robinson et al., 2015)
Quick Ratio	Independent	(Sinha, 2012)
Cash Conversion Cycle	Independent	(Hutchison et al., 2007)

ANALYSIS, RESULTS AND DISCUSSION

The data was subjected to descriptive and inferential analysis. The descriptive statistics include Mean, Standard Deviation, Percentages, Frequencies, Minimum and Maximum. Diagnostic tests including normality test, multicollinearity test and linearity test were first and foremost carried out to meet some crucial assumptions of Classical linear regression model. Having satisfied the diagnostic test, the data were subjected to panel regression, and Hausman's test was employed to choose between random and fixed-effect model.

Descriptive Analysis

On average, cash conversion cycle of Nigerian manufacturing companies is 64 days approximately, the maximum was 843 days, and the minimum was 0 day. This result implies that when they sold on credit, they never received payment in less than 24 hours but until around two months (64 days/30) after sales, and the most extended period for obtaining cash for goods sold on credit was about two years and four months (843/30 = 28 months /12 = 2years 4 months) The standard deviation was 107.8949 days and the data did not have a normal distribution (JB statistics = 5321.984, p = 0.000000).

Similarly, the current ratio was 1.081541, which implies that the companies' existing assets were always greater than their current liabilities during the period of investigation. Th maximum current ratio was 3.901099, which means the company's existing assets were about times 4 of their current liabilities. The maximum was 0, which implies that there were some years that the companies didn't have either existing assets or current liabilities or both. The standard deviation was 0.718083, and the variable did not have a normal distribution.

In like manner, the quick ratio on average was 0.678470 which implies that when inventories and prepayments are removed from current assets, the remaining value of current assets was lower than the current liabilities of the investigated companies during the period of investigation. The maximum was 3.393037, which implies the available current assets apart from inventories and prepaid expenses were approximately 3.4 times the current liabilities. The minimum was zero, which indicates the absence of current liabilities or current asset for some years during the period of investigation. The standard deviation was 0.557672 and the data was not normally distributed (JB Statistics = 0.557672, p-value = 0.000000).

In the same way, Return on assets was 0.050988 approximately 5% on average, the maximum profitability was around 206 % (2.060192 x100) of the amount they invested, and the minimum was – 0.950650 which approximately 95% loss. The standard deviation was 0.226933, and the data were not normally distributed (JB Statistics = 17445.04, p = 0.000000). Also, the Return on equity was 0.279800 on average, which is approximately 28%. The maximum was 17. 02789, which is approximately 170% and the minimum was -1.064433, which is around 106% loss. The standard deviation was 1.312912, and the data was not normally distributed (JB statistics = 173644.6, p = 0.000000).

Table 2. Descriptive Statistics

	CASHCONV	CURRENTR	QUICKRAT	ROA	ROE
Mean	64.37059	1.081541	0.678470	0.050988	0.279800
Median	44.50000	1.049246	0.579034	0.027939	0.129794
Maximum	843.0000	3.901099	3.393037	2.060192	17.02789
Minimum	0.000000	0.000000	0.000000	-0.950650	-1.064433
Std. Dev.	107.8949	0.718083	0.557672	0.226933	1.312912
Skewness	4.658294	0.720092	1.449066	5.292732	12.31092
Kurtosis	28.77867	4.149554	6.301663	51.48482	157.6231
Jarque-Bera	5321.984	24.05219	136.7094	17445.04	173644.6
Probability	0.000000	0.000006	0.000000	0.000000	0.000000
Sum	10943.00	183.8619	115.3400	8.667888	47.56598
Sum Sq. Dev.	1967382.	87.14377	52.55860	8.703267	291.3117
Observations	170	170	170	170	170

Diagnostic Tests

The study carried out some diagnostic tests to meet the assumptions of the classical linear regression model. The assumptions tested include normality test, multicollinearity test and linearity test.

Normality Test

It was noted in table 2 that none of the variables has a normal distribution of the error term. It is required that the dependent variables should be normal. Therefore, this study transformed all the variables to log10 to meet normal distributions. After the transformation, many of the variables were still not normal, as revealed by the p-values. The p-values for ROA, current ratio, cash conversion cycle and quick ratio were .024, .000, .002 and 0.000 respectively. The p-values are lower than 0.05, which shows that deviation from normality was significant, indicating that the data are not normal. However, the p-value for ROE after transformation was .200, which is greater than 0.05, indicating that the deviation from normality was not significant, which means the data was normally distributed. The explanatory variables don't need to have a normal distribution of the error term, but the dependent variables must have. Therefore, ROA is discontinued for further parametric analysis.

Table 3. One-Sample Kolmogorov-Smirnov Test

		LOGROA	LOGROE	Current log	cashlog	quick log
N		137	142	159	134	159
Normal Parameters[a,b]	Mean	-1.3858	-.7923	-.0948	1.7107	-.3256
	Std. Deviation	.45966	.47241	.54004	.41516	.54846
Most Extreme Differences	Absolute	.082	.064	.241	.101	.209
	Positive	.082	.064	.147	.095	.109
	Negative	-.050	-.053	-.241	-.101	-.209
Test Statistic		.082	.064	.241	.101	.209
Asymp. Sig. (2-tailed)		.024[c]	.200[c,d]	.000[c]	.002[c]	.000[c]

Linearity Tests

This study also tested the linearity between the dependent variables and independent variables. The relationship between ROE and cash conversion cycle is linear (Deviation from linearity p-value = .853 > .05 = not significant), the relationship between ROE and current ratio is equally linear (Deviation from linearity p-value = .940 > .05 = not significant), and likewise the relationship between ROE and quick ratio is linear (deviation from linearity p-value = .940 > .05 = not significant). It implies there is a linear relationship between the dependent variable and each of the independent variable in the model, which makes this model valid for multiple linear regression.

Table 4. Linearity Table

Variables		**P-value**
ROE*Cash conversion cycle	Linearity	.025
	Deviation from Linearity	.853
ROE* Current ratio	Linearity	.944
	Deviation from linearity	.940
ROE*Quick ratio	Linearity	.995
	Deviation from Linearity	.940

Multicollinearity Test

The study further tested to ensure there is no multicollinearity problem among the independent variables which may affect the outcome of the analysis. Variance Inflation Factor (VIF) was employed, and the VIF values that are greater than one but less than ten which is the acceptable range indicate the absence of multicollinearity. In contrast, the values outside the

range indicate perfect or strong correlation among the explanatory variables. Likewise, the Tolerance value that is greater than 0 but less than one also shows the absence of multicollinearity. As shown in Table 5, there is no multicollinearity problem in the model for this study.

Table 5. Collinearity Diagnostics

		Tolerance	VIF
1	(Constant)		
	Currentlog	.129	7.777
	cashlog	.933	1.072
	quick log	.131	7.626

Post Estimation Test

A regression model can be estimated by employing Pooled OLS, Fixed effect model and random effect model. Since the variables of this study have panel data, a panel regression model was selected, and the analysis employed Hausman's Test to choose between the fixed-effect model and random effect model. The following null hypothesis is tested:

H_0: Random effect model is appropriate

Ha: Fixed effect model is appropriate.

The p-value of Hausman's Test in Table 6 is 0.1070, which is greater than 0.05; therefore, the null hypothesis cannot be rejected. Therefore, this study employed a random effect model.

Table 6. Hausman's Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	6.096918	3	0.1070

Liquidity and Financial Performance

R-square shows that the variables in the model account for about approximately 8% of the changes in the financial performance of manufacturing firms in Nigeria. Even though the contribution of the model is very low but F-probability shows that the model is significant, thus making it valid for this study (R^2 = 0.076164, F-Stat = 3.215273 and F-Prob. = 0.025464 < 0.05). Table 7 shows that current ratio has an insignificant positive effect on return on equity (β= 0.449326, p = 0.3571 > 0.05). Therefore, the first hypothesis for this study which states that "Current ratio does not have a significant effect on return on equity of listed manufacturing

companies in Nigeria." cannot be rejected. The result implies that everyone naira increases in total asset against total liability or every increase in a current ratio by one per cent increase return on equity by approximately 45%. This outcome is, however, not statistically supported at 5% level of significance.

However, quick ratio has a significant negative effect on financial performance (β = -0.712319, p= 0.0543). Since the p-value is not greater than 0.05, thus, the second null hypothesis for this study which says that "quick ratio does not have a significant effect on Return on equity of listed manufacturing companies in Nigeria is at this moment rejected. It implies that every ₦1 increase in current asset apart from inventories and prepaid expenses against current liability or every increase in the quick ratio by 0.01 or one per cent significantly increases performance (Return on equity) of listed manufacturing companies in Nigeria by approximately 5%.

Furthermore, cash conversion cycle insignificantly has negative effect on financial performance of manufacturing firms in Nigeria (β= -0.051947, p = 0.6384 > 0.05). Therefore, since the p-value is greater than 0.05, the third null hypothesis of this study which states that "cash conversion cycle does not have a significant effect on return on equity of listed manufacturing companies in Nigeria" cannot be rejected. This result implies that any increase in the cash conversion cycle by one day reduces Return on equity by about 5% (-0.051947 =approximately -0.05).

Table 7. Hypothesis Testing

Variable	Coefficient	Std. Error	t-Statistic	Prob.	R^2	F-Stat	F-Prob
C	-0.871659	0.198183	-4.398259	0.0000	0.076164	3.215273	0.025464
CASHLOG	-0.051947	0.110242	-0.471207	0.6384			
QUICKLOG	-0.712319	0.366495	-1.943597	0.0543			
CURRENTL	0.449326	0.485994	0.924552	0.3571			

Discussion of Findings

This random effect model shows that the current ratio has an insignificant positive effect on Return on equity. This position is evident in the probability value of 0.3571, which was more significant than 0.05, with a positive t- statistic of 0.924552. The result implies that every ₦1 increase in total asset against total liability or every increase in a current ratio by one per cent increase return on equity by approximately 45%. This result lends credence to the work of Patjoshi (2016) but contradicts some studies(Ben-Caleb, Olubukunola, & Uwuigbe, 2013; Ehidu, 2014).

The result also shows that the quick ratio has a significant negative effect on financial performance. Since the p-value is not greater than 0.05, it was 0.0543 with a negative t-statistic of -1.943597. Hence an increase in current assets would lead to a 0.01 per cent increase in equity. This result supports the existing studies in terms of statistical significance but contradicts their findings in the name of the direction of relationships because they found e positive relationship (Njure, 2014; Patjoshi, 2016). The table also shows that the cash conversion cycle insignificantly hurts financial performance of manufacturing firms in Nigeria (β = -0.471207, P =0.6348> .05). This result implies that any increase in the cash conversion cycle by one day reduces Return on equity by about 5%. This result also lends support to some existing studies (Ben-Caleb et al., 2013; Jayarathne, 2014), but contradict others (Gill, Biger, & Mathur, 2010; Owolabi & Obida, 2012).

CONCLUSION

The study investigated the effect of liquidity on the performance of listed manufacturing firms in Nigeria. The findings revealed that the current ratio has no significant positive impact on the performance of manufacturing companies, and cash conversion cycle has no significant adverse effect. In contrary, the quick ratio has a significant negative effect on financial performance. The above findings conclude that manufacturing companies are not able to maintain liquidity levels in meeting up their short-term obligations thus; it explains that there is a serious need for liquidity management in helping firms to meet up their short-term obligations.

Having conducted this research and analysed the data, the researcher recommends that manufacturing firms should try to put down and follow strict adherence to policies and practices that helps the firm to maintain a proper balance between their liquidity position and profitability. The efficient management of liquidity is very crucial to profitability and sustainability. Firms should effectively manage their liquidity position in a manner that it generates adequate liquid fund.

A comparative study can be carried out to establish whether the liquidity affects performance in the public sector, which could be the most probable area of interest because little focus on these two main variables (liquidity and profitability) has been made so far. This kind of study will provide a basis for comparison to provide concrete facts upon which reliable and reasonable conclusions can be made and hence find out whether there are areas of commonalities or unique factors. Future researchers can also examine other forms of liquidity such as Basic liquidity ratio (monetary assets divided by monthly expenses), basic defense ratio (current assets divided by daily operational expenses). Liquidity can also be examined on other

financial performance metrics such as Earnings per share, Economic Value Added, Return on Investment and Tobin's q.

REFERENCES

Akenga, G. (2017). Effect of Liquidity on Financial Performance of Firms Listed at the Nairobi Securities Exchange, Kenya. *International Journal of Science and Research (IJSR)*, *6*(7), 279–285. https://doi.org/10.21275/art20175036

Asete, F., & Kung'u, J. N. (2018). Effects of Liquidity Management on Profitability of quoted Manufacturing Firms in Kenya. *IOSR Journal of Economics and Finance*, *9*(6), 54–61. https://doi.org/10.9790/5933-0906015461

Ben-Caleb, E., Olubukunola, U., & Uwuigbe, U. (2013). Liquidity Management and Profitability of Manufacturing Companies in Nigeria. *IOSR Journal of Business and Management*, *9*(1), 13–21. https://doi.org/10.9790/487x-0911321

Cekrezi, A. (2013). A literature review of the trade−off theory of capital structure. *Iliria International Review*, *1*, 125–134.

Charmler, R., Musah, A., Akomeah, E., & Gakpetor, E. D. (2018). The Impact of Liquidity on Performance of Commercial Banks in Ghana. *Academic Journal of Economic Studies*, *4*(4), 78–90.

Demirgünes, K. (2016). The Effect of Liquidity on Financial Performance: Evidence from Turkish Retail Industry. *International Journal of Economics and Finance*, *8*(4), 63. https://doi.org/10.5539/ijef.v8n4p63

Duru, A. N., Ekwe, M. C., & Eje, G. C. (2014). Liquidity Positioning and Firm Performance in Industrial/Domestic Product Companies: Evidence from Nigeria. *IOSR Journal of Economics and Finance*, *5*(6), 25–32. https://doi.org/10.9790/5933-05622532

Ehidu, V. C. (2014). The Impact of Liquidity on Profitability of Some Selected Companies: The Financial Statement Analysis (FSA) Approach. *Research Journal of Finance and Accounting Www.Iiste.Org ISSN*, *5*(5), 81–90. Retrieved from www.iiste.org

Ferrouhi, E. M. (2014). Bank liquidity and financial performance: Evidence from Moroccan banking industry. *Business: Theory and Practice*, *15*(4), 351–361. https://doi.org/10.3846/btp.2014.443

Gill, A., Biger, N., & Mathur, N. (2010). The Relationship Between Working Capital Management And Profitability : Evidence From The United States. *Business and Economics Journal*, *1*(January), 1–9.

Hutchison, P. D., Farris, M. T., & Anders, S. B. (2007). Cash-To-Cash Analysis And Management Print Cash-to-Cash Analysis and Management. *The CPA Journal*, *August*(2007), 39–47.

ICAN. (2014). *Performance management* (1st ed.). United Kingdom: Emile Woolf International.

Jayarathne, T. A. N. R. (2014). Impact of Working Capital Management on Profitability: Evidence From Listed Companies in Sri Lanka. *Reshaping Management and Economic Thinking through Integrating Eco-Friendly and Ethical Practices Proceedings of the 3rd International Conference on Management and Economics 26-27 February 2014 Faculty of Management and Finance, University of Ruhuna, Sri* , (February), 269–274.

Jenson, M. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *The American Economic Review*, *76*(2), 323–329. Retrieved from http://www.jstor.org/stable/1818789

Jenson, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behaviour, Agency Cost and Ownership Structure. *Journal of Financial Economics 3 (1976) 305-360.*, *3*(1976), 305–360.

Kothari, C. & Garg, G. (2019). *Research Methodology: Methods and Techniques* (Fourth). Retrieved from www.newagepublisher.com

Maheswari, V. (2015). Financial Performance of Hero Honda Motors Limited, New Delhi. *Indian Journal of Applied Research*, *5*(5), 19–21.

Marozva, G. (2015). Liquidity And Bank Performance. *International Business & Economics Research Journal (IBER)*, *14*(3), 453. https://doi.org/10.19030/iber.v14i3.9218

Njure, K. C. (2014). The Relationship Between Liquidity And Profitability Of Nonfinancial Companies Listed In Nairobi Securities Exchange (Vol. 12). The University of Nairobi.

Obi-Nwosu, V. O., Okaro, C., Ogbonna, K. S., & Atsanan, A. N. (2017). Effect of Liquidity on Performance of Deposit Money Banks. *International Journal of Advanced Engineering and Management Research*, *2*(4), 67-73–73. Retrieved from http://ijaemr.com/ I

Onyekwelu, U. L., Chukwuani, V. N., & Onyeka, V. N. (2016). Effect of Liquidity Management on Performance of Deposit Money Banks in Nigeria 2000 - 2015. *Journal of Economics and Sustainable Developments*, *9*(4), 156–169. https://doi.org/10.12816/0032106

Owolabi, S. A., & Obida, S. S. (2012). Liquidity Management and Corporate Profitability: Case Study of Selected Manufacturing Companies Listed on the Nigerian Stock Exchange. *Business Management Dynamics*, *2*(2), 10–25. Retrieved from www.bmdynamics.com

Patjoshi, P. K. (2016). A Study on Liquidity Management and Financial Performance Of Selected Steel Companies in India. *International Journal of Advanced Information Science and Technology*, *51*(7), 108–117. https://doi.org/10.15693/ijaist/2016.v5i7.108-117

Robinson, T., Henry, E., Pirie, W., & Broihahn, M. (2015). *International financial statement analysis* (3rd ed.). New Jersey: John Wiley & Sons, Inc.

Sahyouni, A., & Wang, M. (2019). Liquidity creation and bank performance: evidence from MENA. *ISRA International Journal of Islamic Finance*, *11*(1), 27–45. https://doi.org/10.1108/IJIF-01-2018-0009

Sinha, G. (2012). Financial statement analysis. In AK (Ed.), *Ghosh* (Eastern etc). New York: .: Prentice Hall of India Private Limited.

Tamunosiki, K., Giami, I. B., & Obari, B. O. (2017). Liquidity and Performance of Nigerian Banks. *Journal of Accounting and Financial Management ISSN*, *3*(1), 2504–8856. Retrieved from www.iiardpub.org

Yameen, M., Farhan, N. H. S., & Tabash, M. I. (2019). The impact of liquidity on firms' performance: Empirical investigation from Indian pharmaceutical companies. *Academic Journal of Interdisciplinary Studies*, *8*(3), 212–220. https://doi.org/10.36941/ajis-2019-0019