THERELATIONSHIP BETWEEN LIQUIDITY AND THE FINANCIAL PERFORMANCE OF NON-FINANCIAL FIRMS LISTED ON THE GHANA STOCK EXCHANGE (GSE)

MOHAMMED MUSAH-PhD Candidate, School of Finance and Economics, Jiangsu University, 301 Xuefu Road, Zhenjiang, Jiangsu, P.R China

YUSHENG KONG-Professor, School of Finance and Economics, Jiangsu University, 301 Xuefu Road, Zhenjiang, Jiangsu, P.R China

ABSTRACT: *The purpose of this study was to examine the relationship between liquidity and the financial performance of non-financial firms listed on the Ghana Stock Exchange (GSE). Panel data extracted from the audited annual reports of 15 listed non-financial firms for the period 2008 to 2017 was used for the study. In the study, financial performance of the firms was measured through Return on Assets (ROA), Return on Equity (ROE) and Return on Capital Employed (ROCE), whilst the Current Ratio (CR), Quick Ratio (QR) and the Cash Flow Ratio (CFR) were used to proxy liquidity. The study adopted the descriptive and inferential techniques of data analyses. All the study variables were analyzed through the descriptive statistics of mean, standard deviation, variance, minimum and maximum values, range, skewness and kurtosis. Since the study was a correlational study, the Pearson Product-Moment Correlation Coefficient technique of data analysis was employed to measure the strength and direction of the linear relationship that existed between liquidity and the firms' financial performance. All the data analysis were conducted through STATA version 15 software package with a 5% level of significance (p≤0.05). From the study's findings, liquidity surrogated by the Current Ratio (CR), Quick Ratio (QR) and the Cash Flow Ratio (CFR) had a significant relationship with the firms' financial performance as measured by ROA, but liquidity proxied by the Current Ratio (CR), Quick Ratio (QR) and the Cash Flow Ratio (CFR) had no significant association with the firms' financial performance as measured by ROE and ROCE. Based on the findings, the study recommended among others that non-financial firms listed on the Ghana Stock Exchange (GSE) can improve their profitability positions by efficiently managing their liquid assets. Thus, there should be a trade-off between the firms' liquidity and their profitability. In other words, if the firms' liquid assets are handled expertly, their final bottom lines are expected to improve significantly. It was discovered from the study that, liquidity proxied by the current ratio, quick ratio and the cash flow ratio had no significant association with the firms' financial performance as measured by ROE and ROCE. This is an indication that, an increase in liquidity did not significantly lead to an increase in the firms' financial performance as per ROE and ROCE. The study therefore recommended that, factors such as seasonal changes in demand, firm size, manufacturing cycle and technological changes might have a greater influence on the firms' financial performance, and should be seriously considered in the firms' business decisions.*

Key Words: *Relationship, Liquidity, Financial Performance, Non-Financial Firms, Ghana Stock Exchange (GSE), Return on Assets (ROA), Return on Equity (ROE), Return on Capital Employed (ROCE)*

1.0 INTRODUCTION

Liquidity plays a vital role in the fruitful running of establishments. It is therefore very pertinent for firms to keep a close watch on their liquidity positions as without it, they cannot thrive. But firms' attempt to focus on their liquidity adversely affect their profitability, and their attempt to increase their profitability also tend to lessen their liquidity positions (Ashok, Namita & Chaitrali, 2018). Thus, an effective working capital management would be needed to strike a balance between these two core goals of firms (Mueller, 2018;Ben-Caleb, Olubukunola & Uwuigbe, 2013;Ashok, Namita & Chaitrali, 2018; Peavler, 2017; and Ally, 2017).It is also necessary for firms' liquidity positions to be at equilibrium because, extreme liquidity might mean the buildup of idle funds that do not fetch any profits for the firms, whilst inadequate liquidity might damage the firms' good will, belittle their credit standing and might increase their cost of borrowing which might lead to their forced liquidation(Panigrahi, 2013).It is therefore essential for firms to maintain a trade-off between liquidity and their profitability (Mueller, 2018;Ben-Caleb, Olubukunola & Uwuigbe, 2013;Ashok, Namita & Chaitrali, 2018; Peavler, 2017; and Ally, 2017).

Studies on the relationship between liquidity and the financial performance of firms are numerous. The findings of these studies are however divergent. The contradictions in findings might be as a result of the differences in geographical environments and the disparities in various sectors under which those studies were undertaken. For instance Ali and Bilal (2018) studied industrial firms in Jordan; Mehmet and Mehmet (2018) researched on energy sector firms in Turkey; and Kanga and Achoki (2017) investigated agricultural sector firms in Kenya and all established a positive association between liquidity and firms' financial performance. Also, Cudiamat and Siy (2017) studied life insurance companies in the Philippines; Maja, Ivica and Marijana (2017) researched on the food industry in Croatia; and Majumder and Uddin (2017) investigated nationalized banks in Bangladesh and all found converse affiliations between liquidity and firms' financial performance. On the other hand, Ashutosh and Gurpreet (2018) studied sugar mills in Punjab, India; Binay (2018) researched on commercial banks in the Nepal; and Batchimeg (2017) investigated listed companies in Mongolia and all discovered insignificant connections between liquidity and firms' financial performance. Irrespective of the numerous sectorial studies with their contrasting findings, there have been limited research that particularly sought to examine the relationship

between liquidity and the financial performance of non-financial firms listed on the Ghana Stock Exchange (GSE). This study was therefore undertaken to help fill that gap.

1.1 Purpose of the Study

This study sought to establish the strength and direction of the linear relationship between liquidity and the financial performance of non-financial firms listed on the Ghana Stock Exchange (GSE); so as to come out with policy recommendations to help improve upon the liquidity and the profitability positions of the firms. Generally, findings of this study will improve the understanding of the non-financial sector of Ghana with respect to the association that exists between liquidity and the financial performance of firms in that sector. This will provide useful information to students, future researchers, investors, experts and supervisory or regulatory authorities. Specifically, the study sought to;

1. Examine the relationship between liquidity and the firms' financial performance as measured by ROA.

2. Establish the association between liquidity and the firms' financial performance as measured by ROE.

3. Explore the affiliation between liquidity and the firms' financial performance as measured by ROCE.

1.2 Research Hypothesis

The goal of this study could not be achieved without testing some research hypothesis. Therefore based on the specific objectives of the study, the following hypothesis were formulated to help direct the study's focus;

H_{01}: Liquidity has no significant relationship with the firms' financial performance as measured by ROA.

H_{02}: Liquidity has no significant association with the firms' financial performance as measured by ROE.

H_{03}: Liquidity has no significant affiliation with the firms' financial performance as measured by ROCE.

2.0 LITERATURE REVIEW

This section reviews literature that supported the topic understudy. Reviews on the liquidity-profitability trade-off theory form the first part of the section, whilst empirical reviews on the relationship between liquidity and firms' financial performance form the

second part of the section. The final part of the section presents a conceptual framework showing the link between the study's variables.

2.1 Theoretical Reviews on Liquidity

Mueller (2018) viewed liquidity as the availability of cash and cash equivalents to meet short-term operational needs of firms. To the author, assets like stocks and bonds are very liquid since they can be converted into cash within days. Kimberly (2018) also viewed liquidity as the amount of money that is readily available for investment and spending; and consists of cash, treasury bills, notes and bonds, and any other asset that can be sold quickly. According to the author, high liquidity occurs when there is a lot of these assets, whilst low or tight liquidity is when cash is tied up in non-liquid assets. As postulated by Peavler (2017), Mueller (2018)and Ally (2017), creditors and investors usually prefer higher levels of liquidity, but extremely higher levels of liquidity could imply a firm is not properly investing its resources to generate returns. There are many theories or hypothesis on liquidity and its affiliation with corporate financial performance. This study was however built on the liquidity-profitability trade-off theory.

According to the hypothesis, there exist a trade-off between liquidity and the profitability of a firm,and that, an establishment cannot attain the goal of profitability and liquidity at the same time without influencing the other (Idowu, Essien & Adegboyega, 2017; Saluja & Kumar, 2012; Puneet & Parmil, 2012; Mwashi & Miroga, 2018; Naeem, Misbah, Sidra, Hafiz & Nasrullah, 2016; Nazish & Shehla, 2017; Vaita, 2017; and Wambui, Namusonge & Sakwa 2018). The main goal of any firm is to maximize wealth. However, liquidity preservation is also a vital objective of firms. The problem is that, amassing wealth at the expense of liquidity brings serious consequences to firms. Thus, firms need to strike a balance between these two conflicting goals (Ashok, Namita & Chaitrali, 2018; Rizwan, 2016; Shaheen, Muhammad, Muhammad, Mudasar & Muhammad, 2015; Onyekwelu, Chukwuani & Onyeka, 2018; and Pradhan & Shrestha, 2016). According to Idowu, *et al.* (2017), the liquidity-profitability trade-off theory assumes that, the effective supervision of firms is vital to the preservation of security and the safety of their operational systems, to an extent that, they will be in a position to defray their financial obligations without struggles.

This theory was employed because, liquidity is the ability of an establishment to meet its short-range financial commitments as they fall due (Mueller, 2018; Kimberly, 2018; Peavler, 2017; and Ally, 2017). To increase viability, and for an establishment to keep hold of its wealth, it must target an optimal level of liquidity to off-set the benefits and costs of holding cash. Thus, the trade-off hypothesis best linked liquidity and financial performance which were the two variables that were used for the study. In addition, the general claim of literature have aligned itself to the liquidity-profitability hypothesis which posits that, these two financial terms pose conflicting ends to an establishment, hence a pursuit of one will mean a trade-off of the other (Dash & Hanuman, 2008).

2.2 Empirical Reviews on the Relationship between Liquidity and Financial Performance

Kanga and Achoki (2017) examined the impact of liquidity on the financial performance of agricultural firms listed on the Nairobi Securities Exchange (NSE). Secondary data extracted from the audited annual reports of listed agricultural companies for the period 2003 to 2013 was adopted for the study. From the study's pooled ordinary least squares regression analysis, liquidity had a significantly positive influence on the firms' financial performance as measured by ROA and ROE, but an insignificantly positive impact on the firms' EPS. The study's correlational output also discovered a significantly positive relationship between liquidity and the firms' financial performance as measured by ROA and ROE, but an immaterially positive association between liquidity and the firms' EPS was finally established.

Ochingo and Muturi (2018) examined the impact of firm characteristics on the financial performance of savings and credit cooperatives society in Kenya. Data from 164 SACCOS for the period 2013 to 2015 was used for the study. From the study's multiple linear regression analysis, liquidity had a significantly positive influence on the SACCOS' financial performance as measured by ROA. Navleen and Jasmindeep (2016) examined the profitability determinants of the Indian automobile industry for the period 2003-2004 to 2013-2014. Data from listed firms on the Bombay Stock Exchange (BSE) dealing in commercial vehicles, three wheelers, two wheelers and passenger vehicles were used for the study. From the study's correlation and step-wise regression analysis, liquidity was a significant determinant of the firms' profitability.

Cudiamat and Siy (2017) analyzed the profitability of 23 life insurance companies in the Philippines for the period 2000 to 2012. Through the balanced pooled ordinary least squares regression analysis, liquidity had a significantly negative association with the banks' profitability as measured by ROA. Onyekwelu, Chukwuani and Onyeka (2018) conducted a study on the impact of liquidity on the financial performance of deposit money banks in Nigeria. Secondary data obtained from a sample of five (5) banks for the period 2007 to 2016 was adopted for the study. From the study's multivariate regression analysis, liquidity had a significantly positive influence on the banks' financial performance as measured by ROCE. Kamran, Mohammad and Muhammad (2017) explored the determinants of the financial performance of listed financial firms in Pakistan. Data for the period 2008 to 2012 was used for the study. From the study's multiple regression analysis, liquidity had a significant influence on the firms' financial performance. Gonga and Sasaka (2017) examined the determinants of the financial performance of 55 licensed insurance firms in Nairobi County. Data from both primary and secondary sources was employed for the study. From the study's findings, liquidity had an insignificantly positive impact on the firms' financial performance. Mohammad, Ahmad and Mohd (2018) examined the determinants of Malaysian Islamic banks' profitability for the period 1994 to 2015. An unbalanced data from 17 top Malaysian Islamic banks was used for the study. From the study's regression analysis, liquidity had a significant influence on the banks' profitability.Kalyani, Manish and Ketan (2016) conducted a study to examine the determinants of the financial performance of life insurance companies in India. A ten year data from 23 life insurance companies was used for the study. Through correlation and regression analysis, liquidity was not significantly related to the firms' financial performance as measured by ROA.

Ali and Bilal (2018) researched on the determinants of the financial performance of 23 industrial firms listed on the Amman Stock Exchange. Secondary data for the period 2005 to 2015 was used for the study. From the study's regression output, liquidity had a significantly positive effect on the firms' financial performance as measured by ROA.Ayako, Githui and Kungu (2015) researched on the determinants of the financial performance of non-financial firms listed on the Nairobi Securities Exchange. Panel data from 41 firms for the period 2003 to 2013 was employed for the study. From the study's multiple regression output, liquidity was statistically insignificant in explaining the firms' financial performance.

Isik (2017) researched on the profitability determinants of real sector firms listed on the Borsa Istanbul Stock Exchange. Panel data from 153 listed firms for the period 2005 to 2012 was used for the study. From the study's findings, liquidity level was a significant determinant of the firms' profitability as measured by ROA.

Binay (2018) explored the link between liquidity management and the profitability of commercial banks in Nepal. Data for the period 2012 to 2016 was employed for the study. From the study's correlational estimates, liquidity management had an insignificant relationship with the banks' ROA, whilst an insignificant influence of liquidity management on the banks' ROA was also revealed from the study's regression analysis. Maja, Ivica and Marijana (2017) examined the influence of age on the performance of firms in the Croatian food industry. A dynamic panel data from 956 firms operating in the Croatian food sector for the period 2005 to 2014 was used for the study. From the study's regression analysis, the control variable liquidity, had a significantly adverse effect on the firms' performance. Ayu, Zuraida and Mulia (2018) studied the impact of liquidity, profitability and leverage on profit management and its effect on company value in manufacturing firms listed on the Indonesian Stock Exchange. Secondary data extracted from the websites of 150 listed manufacturing firms and the official website of the Indonesian Stock Exchange for the period 2011 to 2015 was used for the study. From the study's findings, liquidity had a significant influence on the firms' profit management.

Wambui, Namusonge and Sakwa (2018) studied the influence of liquidity management on the financial performance of non deposit taking savings and credit cooperative societies in Kenya. Primary data obtained from the administration of questionnaires to respondents was used for the study. From the study's multivariate regression output, liquidity management had a significant impact on the SACCOS' financial performance as measured by ROA, ROE and dividend pay-out. Ali, Mahmoud, Fadi and Mohammad (2018) conducted a study to examine firm-specific and macroeconomic factors that affected the performance of industrial and service firms listed in Jordan. Panel data for the period 2007 to 2016 was employed for the study. From the study's regression estimates, liquidity proxied by the Current Ratio (CR) had a significantly positive influence on the firms' financial performance as measured by ROA.Shoaib, Wang, Jaleel and Peng (2015) examined the determinants of banks' profitability in Pakistan. Panel data for the period 2006 to 2013

was adopted for the study. From the study's regression results, liquidity negatively influenced the banks' profitability.

Jepkemoi (2017) examined the determinants of banks' profitability in Kenya. Secondary data from 10 commercial banks listed on the Nairobi Securities Exchange for the period 2010 to 2014 was adopted for the study. From the study's multiple regression analysis, liquidity had an insignificantly positive impact on the banks' profitability as measured by ROA and ROE. Ologbenla (2018) examined the effect of liquidity management on the performance of insurance companies listed on the Nigerian Stock Exchange. Panel data deduced from the annual reports of 5 listed insurance companies for the period 2003 to 2012 was used for the study. From the study's multivariate regression analysis, liquidity had an insignificant influence on the firms' financial performance as measured by ROA. Ashutosh and Gurpreet (2018) analyzed the financial performance of sugar mills in Punjab. Panel data from both co-operative and private sugar mills for the period 2003-04 to 2013-14 was adopted for the study. From the study's multivariate regression analysis, liquidity measured by the current ratio and the quick ratio had an insignificant influence on the profitability of private sugar mills in Punjab sugar industry.

Mehmet and Mehmet (2018) examined the influence of financial characteristics on the profitability of energy firms listed on Borsa Istanbul Stock Exchange. Quarterly (2008:Q1-2015:Q4) panel data of 10 quoted energy firms was employed for the study. From the study's multiple regression analysis, liquidity ratio had a significantly positive effect on the firms' profitability as measured by ROA. Bougatef (2017) examined the determinants of banks' profitability in Tunisia. Findings of the study provided evidence of a significantly positive connection between liquidity and the banks' profitability as measured by ROA. Irm, Priyarsono and Tria (2017) conducted a study to examine firm specific and macroeconomic factors that determined the profitability of insurance companies in Indonesia. Panel data for the period 2010 to 2014 was employed for the study. From the study's findings, liquidity ratio had a significantly positive effect on the firms' profitability. Nyamiobo, Willy, Walter and Tobias (2018) examined the influence of firm character istics on the financial performance of listed firms on the Nairobi Securities Exchange (NSE). Through the multiple linear regression analysis, liquidity had a significant influence on the firms' financial performance.

Majumder and Uddin (2017) examined the profitability determinants of nationalized banks in Bangladesh for the period 2010 to 2014. From the study's empirical results, liquidity was significantly inversely associated with the banks' profitability as measured by ROA. Akenga (2017) studied the impact of liquidity on the financial performance of firms listed on the Nairobi Securities Exchange (NSE). Data obtained from a sample of 30 listed firms selected through the purposive random sampling technique was used for the study. From the study's inferential analysis, liquidity represented by the current ratio had a significantly positive influence on the firms' financial performance as measured by ROA. Batchimeg (2017) conducted a research to examine the determinants of the financial performance of firms listed on the Mongolian Stock Exchange (MSE) for the period 2012 to 2015. Panel data from 100 listed Joint Stock Companies (JSC) from six (6) major sectors in the Mongolian economy was employed for the study. From the study's regression results, liquidity was not a significant determinant of the firms' financial performance as measured by Return on Assets (ROA), Return on Equity (ROE) and Return on Sales (ROS).

Saripalle (2018) explored the determinants of profitability in the Indian logistics industry. Firm-level data from 201 companies was used for the study. Estimates from the study's econometric model provided evidence of liquidity being a significant determinant of the firms' profitability as measured by ROA. Swagatika and Ajaya (2018) explored the determinants of profitability in Indian manufacturing firms. Data covering the pre and post crisis periods from the year 2000 to 2015 was used for the study. From the study's results, liquidity had a significantly positive influence on the firms' profitability as measured by ROA and NPM. Guru swamy and Marew (2017) delved into the profitability determinants of some selected life insurance companies in Ethiopia. A panel data sourced from the national bank of Ethiopia and the ministry of finance and economic cooperation was used for the study. Through the descriptive, correlation and regression analysis, the study disclosed an insignificant association between liquidity and the firms' profitability. Hamidah and Muhammad (2018) studied the influence of leverage, liquidity and profitability on the performance of companies in Malaysia. Data obtained from 21 companies for the period 2010 to 2014 was employed for the study. From the study's correlational results, liquidity as measured by the current ratio had a significantly positive connection with the firms' ROA,

whilst a significantly positive influence of liquidity on the firms' financial performance was discovered from the study's multivariate regression analysis.
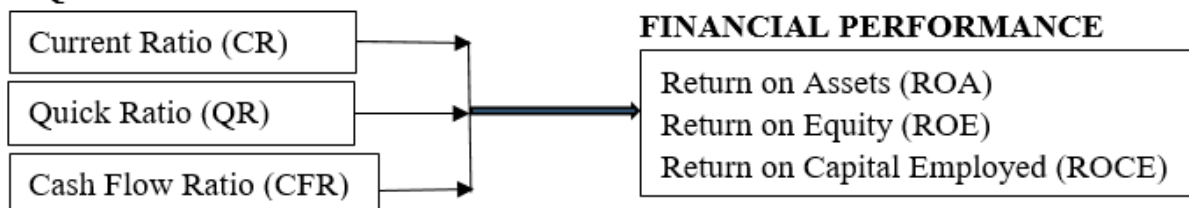
Wondwossen (2016) delved into factors that affected the profitability of general insurance companies in India. Panel data from 4 public and 6 private insurance companies for the period 2006 to 2016 was used for the study. Through the fixed effects regression model, liquidity had an inverse influence on the firms' profitability. Matin (2017) examined the determinants of banks' profitability in Bangladesh. Panel data from 47 commercial banks for the period 2010 to 2015 was employed for the study. From the study's Feasible Generalised Least Squares (FGLS) regression analysis, liquidity had a significantly negative influence on the banks' profitability as measured by ROA, whilst a significantly positive influence of liquidity on the banks' NIM was also established.Islam and Nishiyama (2016) examined the profitability determinants of 259 commercial banks in Bangladesh, India, Nepal and Pakistan for the period 1997 to 2012. From the study's empirical findings, liquidity had a negative impact on the banks' profitability.

2.3 Conceptual Model/Framework

Figure 1 shows the conceptual framework that guided the conduct of the study.The framework indicates that corporate liquidity surrogated by the current ratio, quick ratio and the cash flow ratio had a link with the firms' financial performance as measured by ROA, ROE and ROCE. The framework also displays that, corporate liquidity represented by the current ratio, quick ratio and the cash flow ratio had a connection with the firms' financial performance as measured by ROA, ROE and ROCE. The framework finally portrays that, corporate liquidity proxied by the current ratio, quick ratio and the cash flow ratio had an affiliation with the firms' financial performance as measured by ROA, ROE and ROCE.

Figure 1: Conceptual Framework

LIQUIDITY: Current Ratio (CR), Quick Ratio (QR), Cash Flow Ratio (CFR)

FINANCIAL PERFORMANCE: Return on Assets (ROA), Return on Equity (ROE), Return on Capital Employed (ROCE)

(Source: Authors, 2019)

The study used three measures of financial performance and three measures of corporate liquidity. Financial performance was proxied by Return on Assets (ROA), Return on Equity

(ROE) and Return on Capital Employed (ROCE). Return on assets was calculated as the ratio of net income to total assets of the firms. Return on equity was also calculated as the net income divided by the total equity of the firms, whilst the ratio of net income to capital employed was used to compute the firms' ROCE.The Current Ratio (CR), Quick Ratio (QR) and Cash Flow Ratio (CFR) were employed as proxies for liquidity. The current ratio was computed as the total current assets divided by the total current liabilities of the firms. The quick ratio was computed as the ratio of total liquid assets to total current liabilities of the firms, whilst the cash flow ratio was calculated as the net cash flow from operations divided by the total current liabilities of the firms.

3.0 RESEARCH METHODOLOGY

A research methodology is the general research strategy that outlines the way in which a particular research is to be undertaken and, among other things, identifies the methods to be used in it (Howell, 2013; Irny & Rose, 2005; and Katsicas, 2009).These methods, described in the methodology, define the means or modes of data collection or, sometimes, how a specific result is to be calculated (Howell, 2013; Irny & Rose, 2005; and Katsicas, 2009).This section presents the research methodology. The section is divided into research design, population and sampling, data collection procedure, data validity and reliability, ethical considerations and data analysis.

3.1 Research Design

Generally, this study was a *quantitative research.* According to *Goertzen (2017),* Given (2008),*Corrine (2011), Kasim, Alexander and Hudson (2010) and* Mesly (2015), a quantitative research is the systematic empirical investigation of observable phenomena via statistical, mathematical or computational techniques. The quantitative research method was adopted because; it allowed for broader study involving a greater number of subjects, thereby enhancing the generalization of results; and its studies could be replicated or repeated due to their high reliability (Babbie, 2010; McNabb, 2008; and Singh, 2007). This study was specifically *correlational* in nature because it sought to measure two or more variables and assess the statistical relationship (association) that existed between them with little or no effort to control or manipulate exogenous (predictor) variables (Pelham, Carvallo & Jones, 2005). The study was also *panel or longitudinal* in nature because it followed the sample over time and made repeated observations (Forgues, Bernard & Vandangeon-

Derumez, 2011; and Teotonio, 2012). The study was finally conclusive in nature because, it was carried out to test formulated hypothesis; it provided a reliable or representative picture of the population through the application of valid research instrument; and its findings was viewed as significant as it could have theoretical or applied implications (Nargundkar, 2008).

3.2 Population and Sampling

All the twenty eight (28) non-financial firms listed on the Ghana Stock Exchange (GSE) representing 68.29% of the total number (41) of listed firms formed the target population of the study. The purposive, selective or judge mental sampling technique was employed to selecta sample from the target population. As postulated by Crossman (2018), purposive sampling is a non-probabilistic sampling technique in which a sample is selected based on the characteristics of a population and the intent of the study. This technique was adopted because it was flexible, and met the multiple needs and interests of the researcher. Thus, it was the only viable sampling technique that could help the researcher to obtain information from a very specific group of individuals or elements that possessed the researcher's traits of interest (Black, 2010; and Saunders, Lewis & Thornhill, 2012).

The number of years in existence, technical suspension due to one reason or the other, unaudited financial records, non-existence of trend records, incomplete financial statements and the presentation of annual reports in foreign currencies either than that of the currency of Ghana (because of the non-stability of the Ghana Cedi to major foreign currencies) were the factors or filters that were considered during the sampling process. Firms that failed in any of the above filters or factors did not form part of the study's sample. In all, thirteen (13) firms were rejected as they failed in one or more of the factors that were considered for the sampling. The sample therefore totaled fifteen (15) representing 53.57% of the target population or 36.59% of the total number of listed firms on the Ghana Stock Exchange (GSE). The fifteen (15) selected non-financial firms were the Ghana Oil Company Ltd, Total Petroleum Ghana Ltd, Starwin Products Ltd, Camelot Ghana Ltd, Aluworks Ltd, Clyde stone Ghana Ltd, African Champion Industries Ltd, Benson Oil Palm Plantation Ltd, Fan Milk Ltd, Guinness Ghana Breweries Ltd, Unilever Ghana Ltd, PZ Cussons Ghana Ltd, Produce Buying Company Ltd, Mechanical Lloyd Company Ltd and Sam Woode Ltd.

3.3 Data Collection Procedure

A *balanced secondary data* extracted from the audited and published annual reports of the selected firms for the period 2008 to 2017 was used for the study. The annual reports comprised of the comprehensive income statement, statement of financial position, statement of cash flows, statement of changes in equity and notes to the accounts. The period 2008 to 2017 was considered for the study because, it was the period with the latest data and was therefore very relevant to the topic understudy. Ratios relating to the firms' liquidity and financial performance were then computed from the annual reports using various measurements or formulas outlined for the study.

3.4 Data Validity and Reliability

According to Brinkman, Haakma and Bouwhuis (2009), Lozano, Carcía-Cueto and Muñoz (2008), Lieberman (2008) and Moret, Reuzel, van der Wilt and Grin (2007), validity simply means a measure can lead to a proper and correct conclusions to be drawn from the sample that are generalizable to the entire population. In this study, validity was ensured by collecting data from the right source (i.e. the Ghana Stock Exchange). Also, only annual reports audited by authorized Certified Chartered Accountants was considered for the study. To further ensure the validity and accuracy of the final results, the data collection and calculation process was triple checked by the researcher. Reliability on the other hand, is viewed by Kramer, Douglas and Vicky (2009), Cozby (2009), Kendell and Jablensky (2003), Kendler (2006) and Perri and Lichtenwald (2010) as the extent to which a measurement gives results that are very consistent. This study ensured reliability in the data by making sure that, the data collected was within the study period; the data was complete and accurate; and the data was obtained from its original source and not from a source where it might have been manipulated or altered.

3.5 Ethical Considerations

On ethical considerations, Tripathy (2013) indicated that, if the data is freely available on the Internet, books or other public forums, permission for further use and analysis is implied but the ownership of the original data must be acknowledged. This study acknowledged all sources from which data or information was obtained.

3.6 Data Analysis

The study adopted the descriptive and inferential techniques of data analyses. All the study variables were analyzed through the descriptive statistics of mean, standard deviation, variance, minimum and maximum values, range, skewness and kurtosis. Since the study was a correlational study, the Pearson Product-Moment Correlation Coefficient or Pearson's Correlation Coefficient technique of data analysis, developed by Karl Pearson from a related idea introduced by Francis Galton in the 1880s, was employed to measure the strength and direction of the linear relationship that existed between liquidity and the firms' financial performance. All the data analysis was conducted through the use of STATA version 15 software with a 5% level of significance ($p \leq 0.05$).

4.0 RESULTS OF THE STUDY

This section presents the study's results. The section is divided into the two, thus, the univariate analysis of study variables and the bivariate associations between liquidity and the financial performance of the sampled firms. The descriptive or univariate analysis of the study variables, includes the analysis of the variables with respect to their *means, standard deviations, variances, minimum and maximum values, range, skewness and kurtosis; whilst the bivariate analysis sought to explore the strength and direction of the linear relationship that existed between the liquidity and financial performance indicators.*

4.1 Univariate Analysis of Study Variables

According to Babbie (2009), Nick (2007), Mann (1995), Dodge (2003) and Trochim (2006), univariate analysis (also known as descriptive analysis) is the quantitative description of the features of a single variable. All the study *variables were analysed through descriptive statistics of mean, standard deviation, variance, minimum and maximum values, range, skewness and kurtosis.* From Table 1 ROAhad a mean value of 0.0052693. The mean ROA figure of 0.0052693 implies, the firms were making 0.52693 pesewas of profit on each cedi of investments made from the year 2008 to 2017. The positive mean figure for ROA is an indication that, the assets or investments of the firms were been used efficiently by management to generate profits.

Table 1: Descriptive Statistics on Study Variables

Variables	ROA	ROE	ROCE	CR	QR	CFR
Mean	0.0052693	0.167214	0.1945633	1.313404	0.8497347	0.3265207
Std. Dev.	0.4849762	1.184918	1.09571	1.195626	0.9351417	0.7158448
Variance	0.2352019	1.404031	1.20058	1.429521	0.87449	0.5124337
Minimum	-5.6487	-4.5277	-1.5666	0.0358	0.0329	-1.6939
Maximum	0.7656	12.8951	12.8951	7.6849	6.1178	4.4039
Range	6.4143	17.4228	14.4617	7.6491	6.0849	6.0978
Skewness	-10.64317	7.859589	10.44939	3.107405	3.304711	2.787994
Kurtosis	124.8778	91.75657	122.057	14.42306	15.39389	15.23229
Obs (N)	150	150	150	150	150	150

(Source: STATA Output, 2019)

The ROA distribution had a maximum value of 0.7656 and a minimum value of -5.6487 leading to a range of 6.4143. ROA for the firms also had a standard deviation of 0.4849762 and a variance of 0.2352019. This implies, data values of ROA deviated from both sides of the average by 0.4849762, which is an indication that, the data values were not too widely dispersed from the average. The figure -10.64317 being the skewness for ROA indicates that, the ROA distribution was highly negatively skewed or skewed to the left. This is an indication that, a greater portion of the ROA distribution fell on the right side. In other words, the left tail of the ROA distribution was longer than that of the right tail. The kurtosis coefficient of 124.8778 [excess (K)=124.8778-3.0=121.8778] shows that, the ROA distribution was *leptokurtic* or *slender* in shape. In other words, the ROA distribution was not normally distributed as it had *fatter* tails that asymptotically approached zero more slowly than a *Gaussian distribution,* and therefore produced more outliers than the normal distribution.

The ROE of the firms had an average value of 0.167214. This implies, on the average, every cedi of common stockholders' equity generated 16.7214 pesewas of net income. The positive mean ROE is an indication that, management were efficiently utilizing shareholder's capital to generate income and profits. This serves as a favourable sign for potential investors because, they are likely to get a return on their investments. The positive average ROE is also not just an indication of the firms' profitability, but shows that, the firms

were good at using their retained earnings (which have minimal risks because it does not increase the debt position of establishments) efficiently to generate revenues. The positive average ROE of the firms further signposts that, they had a huge economic *moat*. Thus, the firms had the ability to maintain competitive advantage over their competitors by protecting their long-term profits and market share. The firms having an economic moat also implies, they were worthy enough to generate economic profits for a longer stretch of time, and were able to reinvest those cash flows at a high rate of return for a longer period.The firms' ROE also had a standard deviation of 1.184918 and a variance of 1.404031. This is an indication that, data values of ROE deviated from both sides of the average by 1.184918, implying, the values were a bit much dispersed from the mean.

Return on Equity (ROE) of the sampled firms also had a minimum value of -4.5277 and a maximum value of 12.8951leading to a range of 17.4228. The distribution for ROE was positively skewed with a coefficient of 7.859589, implying, the right tail of the ROE distribution was longer than that of the left tail. The kurtosis value of 91.75657 [excess (K)= 91.75657-3.0 = -88.75657] shows that, the ROE distribution was *leptokurtic* or *slender* in shape. In other words, the ROE distribution was not normally distributed as it had *fatter*tails that asymptotically approached zero more slowly than a *Gaussiandistribution,* and therefore produced more outliers than the normal distribution.The ROCE of the firms had an average value of 0.1945633. The mean ROCE figure implies, for every cedi invested in capital employed, the firms made 19.45633 pesewas of profits. The positive ROCE figure depicts that, the firms were efficiently using their capital employed as well as their long-term financing strategies. The return on capital employed ratio must however be always higher than the rate at which firms borrow to fund their assets. For instance, if the sampled firms had borrowed at 10% and have achieved a return of 19.46% as the average ROCE figure (0.1945633) have shown, it means the firms have made gains.

Conversely, if the mean ROCE of the firms was to be lesser than the rate at which they had borrowed (say 0.05 or 5%), it means a loss on the part of the firms. The ROCE of the sampled firms had a standard deviation of 1.09571 and a variance of 1.20058. This means that, the data for ROCE deviated from both sides of the mean by 1.09571, which is an indication that, the data was a bit widely dispersed from the average. The minimum and maximum values of ROCE were -1.5666 and 12.8951 respectively, leading to a range of

14.4617. The distribution for ROCE was highly positively skewed with a coefficient of 10.44939, implying a greater portion of the ROCE distribution fell on the left hand side.In other words, the right tail of the ROCE distribution was longer than that of the left tail.The kurtosis value of 122.057 [excess (K)=122.057-3.0=119.057] is an indication that, the ROCE distribution was higher and peakier *(leptokurtic)* than the *Gaussian distribution* which shows its abnormality.

The CR of the firms sought to measure the firms' ability to meet their short-term financial obligations. From the results, the CR of the firms had an average value of 1.313404, a maximum value of 7.6849 and a minimum value of 0.0358, resulting in a range of 7.6491. The mean CR value of 1.313404 implies, the firms were not too safe in terms of good financial health. Thus, the current assets of the firms were not too much greater than the current liabilities and suggests that, a little portion of the current assets (1.313404-1= 0.313404) would be left if the current obligations of the firms were to be met. The average CR figure is also an indication that, the operating cycle efficiency of the firms was not too good or the firms were not able to turn their products into too much cash. However, the mean CR figure of the firms does not necessarily indicate that, they were in a shaky state of financial well-being. This is because, the firms might have been using their current assets efficiently by managing their working capital appropriately. In other words, a greater portion of the liquid assets of the firms might have been putting into long-term investments.

The CR of the firms also had a standard deviation of 1.195626 and a variance of 1.429521. This implies, dispersions or deviations around the mean CR was 1.429521, which is an indication that, the data values of CR were a bit widely dispersed from the mean. The skewness value of 3.107405 for CR means, the CR distribution was highly positively skewed or skewed to the right. This is an indication that, a greater portion of the CR distribution fell on the left side. The kurtosis value of 14.42306 [excess (K)=14.42306-3.0=11.42306] is an indication that, the CR distribution was higher and peakier *(leptokurtic)* than the normal distribution which shows it's a bnormality.

The sampled firms' had a mean QR of 0.8497347, a minimum value of 0.0329 and a maximum value of 6.1178, leading to a range of 6.0849. The average QR value of 0.8497347 means, the firms were not fully equipped with sufficient assets that could be instantly liquidated to pay off their current liabilities. In other words, the firms were not in a position

to be able to pay off their current liabilities in the short-term. The QR of the firms also had a standard deviation of 0.9351417 and a variance of 0.87449. This is an indication that, the data values of QR were somehow widely dispersed from the mean. The QR distribution of the sampled firms had a skewness coefficient of 3.304711, indicating that, the distribution was positively skewed. With a kurtosis value of 15.39389 [excess (K)= 15.39389-3.0=12.39389], it can be concluded from the study that, the distribution for QR was not of normal shape as it was higher and peakier than the normal curve.

The CFR sought to measure how well the current liabilities of the firms were covered by the cash flows generated from the firm's operations. Operating cash flow ratio was considered as essential for this study because, it was viewed as one of the accurate measures of liquidity since it could not be easily manipulated like earnings. The CFR of the firms had an average value of 0.3265207, a maximum value of 4.4039 and a minimum value of -1.6939, resulting in a range of 6.0978. The average CFR value of 0.3265207 depicts that, for the period 2008-2017, the firms were not able to generate more cash than what was needed to pay off their current liabilities when they fell due. In other words, the firms' current liabilities could not be covered by the cash generated from their operations over the period. However, there could be many interpretations for the mean value because, not all low operating cash flow ratios are indications of poor financial health. For instance, the firms might have invested their cash flows into projects that could render greater rewards in the future. The figures0.7158448 and 0.5124337 being the standard deviation and the variance of CFR respectively indicate that, the data values of CFR were not too dispersed or deviated from the average. The operating cash flow ratio had a skewness value of 2.787994, which is an indication that, the CFR distribution was highly positively skewed or skewed to the right. The kurtosis value of 15.23229 [excess (K)=15.23229-3.0=12.23229] for CFR shows that, the CFR distribution was not normally distributed which is explained by the wide range of 6.0978.

4.2 Bivariate Associations between Liquidity and Financial Performance

Table 2 shows the bivariate relationships between liquidity and the financial performance of non-financial firms listed on the Ghana Stock Exchange. From the table, there was a significantly weak and positive link between ROA and CR at the 5% level of significance [r=0.2061, (p=0.0114)<0.05].The positive correlation between CR and ROA

implies, an increase in CR led to an increase in ROA and vice-versa, and a decrease in CR led to a decrease in ROA and vice versa. The strength of association that existed between CR and ROA can be substantiated by the coefficient of determination (r^2 =0.0425) which indicates that 4.25% of the variations in ROA was accounted for by CR and 4.25% of the variations in CR was explained by ROA. The unexplained variance [95.75% or (1-r^2 =0.9575)] may be attributed to other variables that were not included in the study.

The relationship between QR and ROA was weakly positive (r =0.1841) and statistically significantly different from 0 at the 95% confidence interval [(p=0.0242)<0.05].The positive connection between QR and ROA is an indication that an increase in QR led to an increase in ROA and vice-versa, and a decrease in QR led to a decrease in ROA and vice versa. The degree of association that existed between QR and ROA can also be proven by the coefficient of determination (r^2 =0.0006) which shows that 0.06% of the variations in ROA was accounted for by QR and 0.06% of the variations in QR was explained by ROA. The unexplained variations [99.94% or (1-r^2 =0.9994)] may be aligned to other factors that were not involved in the study.

Table 2: Correlations of Liquidity with the Firms' Financial Performance

Variables	ROA	ROE	ROCE	CR	QR	CFR
ROA	1.0000					
ROE	0.0037	1.0000				
	(0.9642)					
ROCE	-0.0156	0.9516*	1.0000			
	(0.8498)	(0.0000)				
CR	0.2061*	0.0164	-0.0072	1.0000		
	(0.0114)	(0.8421)	(0.9299)			
QR	0.1841*	0.0375	0.0216	0.9660*	1.0000	
	(0.0242)	(0.6485)	(0.7927)	(0.0000)		
CFR	0.2000*	0.0356	0.0285	0.7449*	0.7571*	1.0000
	(0.0142)	(0.6657)	(0.7293)	(0.0000)	(0.0000)	

*Note: * implies significance at the 5% level and values in parenthesis ( ) represent probabilities.*

(Source: STATA Output, 2019)

Further, CFR and ROA were significantly positively related to each other with a correlation coefficient of 0.2000 and a *p value* of 0.0142 at α=5%. The positive relationship between CFR and ROA means, an increase in CFR led to an increase in ROA and vice-versa, and a decrease in CFR also led to a decrease in ROA and vice-versa. The strength of association that existed between CFR and ROA can be justified by the coefficient of determination (r^2 =0.04) which shows that 4.0% of the variations in ROA was accounted for by CFR and 4.0% of the variations in CFR was explained by ROA. The unexplained variances [96.0% or (1-r^2 =0.9600)] may be affiliated to other elements that were not incorporated into the study. There was also an in significantly positive association between CR and ROE at the 5% level of significance [r=0.0164, (p=0.8421)>0.05]. The *r* value of 0.0164 is an indication that, an increase in CR led to an increase in ROE and vice-versa, and a decrease in CR also led to a decrease in ROE and vice-versa. The insignificantly positive association between CR and ROE can be explained by the coefficient of determination (r^2 =0.0003) which indicates that, 0.03% of the changes in ROE was explained by CR and 0.03% of the changes in CR was accounted for by ROE. The remaining unexplained variabilities [99.97% or (1-r^2 =0.9997)] may be attributed to a myriad of factors that were absent from the study.

Additionally, the study established an in significantly positive relationship between QR and ROE at the 95% confidence interval [r =0.0375, (p=0.6485)>0.05]. The figure 0.0375 being the correlation coefficient between QR and ROE implies, as QR increased, ROE also increased in the same direction and vice-versa, and as QR decreased, ROE also decreased in the same direction and vice-versa. The insignificantly positive relationship that existed between QR and ROE is evidenced by the coefficient of determination (r^2 =0.0014) which indicates that, 0.14% of the changes in ROE was explained by QR and 0.14% of the changes in QR was also accounted for by ROE. The remaining 99.86% (1-r^2 =0.9986) of the variations may be attributed to other inherent variabilities. The study also disclosed an in significantly positive association between CFR and ROE at α=5% [r =0.0356, (p=0.6657)>0.05].The insignificantly positive correlation that existed between CFR and ROE means, an increase in CFR led to an increase in ROEand vice- versa ,and a decrease in CFR also led to a decrease in ROE and vice-versa. The connection between CFR and ROE can be substantiated by the coefficient of determination (r^2 =0.0013) which indicates that, 0.13% of the variations in ROE

were explained by CFR and 0.13% of the variations in CFR were accounted for by ROE. The unexplained variations [99.87% or (1-r^2 =0.9987)] may be attributed to other issues that were not covered by the study.

Current Ratio (CR) further had an insignificantly adverse association with ROCE at the 95% confidence interval [r = -0.0072, (p=0.9299)>0.05]. The *r* value of -0.0072 is an indication that, as CR increased, ROCE decreased and vice-versa.The insignificantly inverse association between CR and ROCE can also be explained by the coefficient of determination (r^2 =0.00005) which shows that, 0.005% of the changes in ROCE were explained by CR and 0.005% of the variations in CR were accounted for by ROCE. The remaining 99.995% (1-r^2 =0.99995) of the variations may be attributed to other inherent variabilities that were not embraced by the study. Similarly, QR and ROCE were insignificantly positively related to each other at α=5% [r =0.0216, (p=0.7927)>0.05]. The correlation coefficient of 0.0216 means, an increase in QR led to an increase in ROCE and vice-versa, and a decrease in QR also led to a decrease in ROCE and vice-versa. The link between QR and ROCE can also be justified by the coefficient of determination (r^2 =0.0005) which shows that, 0.05% of the variations in ROCE was accounted for by QR and 0.05% of the variations in QR was explained by ROCE. The unexplained changes or variations [99.95% or (1-r^2 =0.9995)] may be accounted for by other factors that did not form part of the study.

The study finally revealed an insignificantly positive association between CFR and ROCE at the 95% confidence interval [r = 0.0285, (p=0.7293)>0.05]. The *r* value of 0.0285 is an indication that, an increase in CFR led to an increase in ROCE and vice-versa,and a decrease in CFR also led to a decrease in ROCE and vice versa. The insignificantly positive association that existed between CFR and ROCE can be substantiated by the coefficient of determination, which indicates that, 0.08% (r^2 =0.0008) of the changes in ROCE was explained by CFR and 0.08% of the changes in CFR was accounted for by ROCE. The unexplained variances (1-r^2 =0.9992) or 99.92% may be attributed to others issues that were not captured in the study.

5.0 DISCUSSIONS

Relationship between Liquidity and Financial Performance as Measured by ROA: From the study's findings, liquidity measured by CR had a significantly weak and positive association with ROA at the 5% level of significance [r=0.2061, (p=0.0114)<0.05]. Liquidity

measured by QR also had a significantly weak and positive affiliation with the firms' ROA at the 95% confidence interval [r =0.1841, (p=0.0242)<0.05].Finally, liquidity measured byCFR was significantly weak and positively related to ROA at α=5% [r =0.2000, (p=0.0142)<0.05]. These findings supported that of Nyamiobo, Willy, Walter and Tobias (2018) whose study on listed firms on the Nairobi Securities Exchange (NSE) found a significant association between liquidity and the firms' financial performance. The study's findings were also in tandem with that of Saripalle (2018) whose research on 201 Indian logistic companies, discovered a significant connection between liquidity and the firms' profitability measured by ROA.

The study's findings were also in line with that of Bougatef (2017) whose study on the banking industry in Tunisia, established a significantly positive association between liquidity and the banks' profitability as measured by ROA. The study's findings were also consistent with that of Swagatika and Ajaya (2018) whose study on Indian manufacturing firms, found a significantly positive association between liquidity and the firms' profitability as measured by ROA.The study's findings were however in disparity with that Batchimeg (2017) whose research on 100 Joint Stock Companies (JSC) listed on the Mongolian Stock Exchange (MSE) found an insignificant link between liquidity and the firms' financial performance as measured by ROA. The study's findings did not also agree with that of Guruswamy and Marew (2017) whose research on some selected life insurance companies in Ethiopia, disclosed an insignificant association between liquidity and the firms' profitability. The study's findings was finally inconsistent with that of Majumder and Uddin (2017) whose study on nationalized banks in Bangladesh found an inverse relationship between liquidity and the banks' profitability measured by ROA.

Test of Hypothesis One: From the study's findings, liquidity surrogated by the Current Ratio (CR), Quick Ratio (QR) and the Cash Flow Ratio (CFR) had a significantly positive association with the firms' financial performance as measured by ROA. The study therefore failed to accept the *null hypothesis(H_{01})* that, liquidity had no significant relationship with the firms' financial performance as measured by ROA and concluded that, liquidity measured by the CR, QR and the CFR had a significantlypositive affiliation with the firms' financial performance as measured by ROA.

Relationship between Liquidity and Financial Performance as Measured by ROE:The study disclosed an in significantly positive association between CR and ROE at the

5% level of significance [r =0.0164, (p=0.8421)>0.05]. An insignificantly positive relationship between QR and ROE was also established at the 95% confidence interval [r =0.0375, (p=0.6485)>0.05].Finally, an insignificantly positive association was found between CFR and ROE at α=5% [r =0.0356, (p=0.6657)>0.05].These findings were in line with that of Ologbenla (2018) whose study on 5 insurance companies listed on the Nigerian Stock Exchange, found an insignificant relationship between liquidity and the firms' financial performance. The study's findings were also consistent with that of Ashutosh and Gurpreet (2018) whose study on sugar mills in Punjab, revealed an insignificant relationship between liquidity and the profitability of private sugar mills in the Punjab sugar industry. The study's findings further supported that of Jepkemoi (2017) whose research on 10 commercial banks listed on the Nairobi Securities Exchange (NSE) established an insignificantly positive association between liquidity and the banks' profitability as measured by ROE.The study's findings were however not in agreement with that of Mehmet and Mehmet (2018) whose study on 10 energy firms listed on Borsa Istanbul Stock Exchange, found asignificantly positive association between liquidity ratio and the firms' profitability.

The study's findings were also not consistent with that of Ayu, Zuraida and Mulia (2018) whose study on 150 listed manufacturing firms on the Indonesian Stock Exchange, established a significant affiliation between liquidity and the firms' profit management. The study's findings finally contrasted with that of Wambui, Namusonge and Sakwa (2018) whose research on non deposit taking savings and credit cooperative societies in Kenya, discovered a significant connection between liquidity management and the financial performance of the SACCOS'.

Test of Hypothesis Two: From the study's findings, liquidity proxied by the Current Ratio (CR), Quick Ratio (QR) and the Cash Flow Ratio (CFR) had an in significantly positive association with the firms' financial performance as measured by ROE. The study therefore failed to reject the *null hypothesis(H_{02})* that, liquidity had no significant association with the firms'financial performance as measured by ROE and concluded that, liquidity surrogated by the CR, QR and the CFR had an in significantly positive connection with the firms' financial performance as measured by ROE.

*Relationship between Liquidity and Financial Performance as Measured by ROCE:*From the study's findings,CRhad an insignificantly adverse association with ROCE at

the 95% confidence interval [r = -0.0072, (p=0.9299)>0.05]. An insignificantly positive affiliation was also found between QR and ROCE at α=5% [r =0.0216, (p=0.7927)>0.05].The study finally discovered an insignificantly positive association between CFR and ROCE at the 5% significance level [r = 0.0285, (p=0.7293)>0.05]. These findings lended support to that of Ayako, Githui and Kungu (2015) whose research on 41 non-financial firms listed on the Nairobi Securities Exchange (NSE) found a statistically insignificant affiliation between liquidity and the firms' financial performance. The study's findings were also in tandem with that of Gonga and Sasaka (2017) whose research on 55 licensed insurance firms in Nairobi County, discovered an insignificant association between liquidity and the firms' financial performance. The study's findings were further in line with that of Kalyani, Manish and Ketan (2016) whose study on 23 life insurance companies in India, established an insignificant relationship between liquidity and the firms' financial performance.

The study's findings also agreed with that of Binay (2018) whose research on commercial banks in Nepal, found an insignificant link between liquidity and the banks' financial performance. The study's findings were however in contradiction with that of Ochingo and Muturi (2018) whose study on 164 savings and credit cooperative societies in Kenya, found a significantly positive association between liquidity and the SACCOS' financial performance. The findings did not also support that of Kanga and Achoki (2017) whose research on agricultural firms listed on the Nairobi Securities Exchange (NSE) discovered a significant link between liquidity and the firms' financial performance. The study's findings were finally in disagreement with that of Onyekwelu, Chukwuani and Onyeka (2018) whose research on five (5) deposit money banks in Nigeria, disclosed a pertinent relationship between liquidity and the banks' financial performance as measured by ROCE.

Test of Hypothesis Three: From the study's findings, liquidity represented by the Current Ratio (CR), Quick Ratio (QR) and the Cash Flow Ratio (CFR) had an insignificant affiliation with the firms' financial performance as measured by ROCE. The study therefore failed to reject the *null hypothesis (H_{03})* that, liquidity had no significant affiliation with the firms' financial performance as measured by ROCE and concluded that, liquidity proxied by the CR, QR and the CFR had an insignificant relationship with the firms' financial performance as measured by ROCE.

Table 3: Summary of the Tests of Hypothesis

Hypothesis	Analytical Tool	Result
H_{01}:Liquidity has no significant relationship with the firms' financial performance as measured by ROA	Correlation	Rejected
H_{02}:Liquidity has no significant association with the firms' financial performance as measured by ROE	Correlation	Accepted
H_{03}:Liquidity has no significant affiliation with the firms' financial performance as measured by ROCE	Correlation	Accepted

(Source: Authors, 2019)

6.0 CONCLUSION AND RECOMMENDATIONS

The purpose of this study was to examine the relationship between liquidity and the financial performance of non-financial firms listed on the Ghana Stock Exchange (GSE). Panel data extracted from the audited annual reports of 15 listed non-financial firms for the period 2008 to 2017 was used for the study. In the study, financial performance of the firms was measured through Return on Assets (ROA), Return on Equity (ROE) and Return on Capital Employed (ROCE), whilst the Current Ratio (CR), Quick Ratio (QR) and the Cash Flow Ratio (CFR) were used to proxy liquidity. From the study's Pearson Product-Moment Correlation Coefficient estimates, liquidity surrogated by the current ratio, quick ratio and the cash flow ratio had a significant relationship with the firms' financial performance as measured by ROA, but liquidity proxied by the current ratio, quick ratio and the cash flow ratio had no significant association with the firms' financial performance as measured by ROE and ROCE.

Based on the findings, the study recommends that non-financial firms listed on the Ghana Stock Exchange (GSE) can be very fruitful if they are able to transform their cash flow from operations within the same operational cycle. If this is not conceivable, the firms might need to borrow to supplement their continued working capital needs. Thus, the indistinguishable goals of profitability and liquidity must be well coordinated. The firms' investments in liquid assets are unavoidable to guarantee the conveyance of goods and services to their eventual clients, and appropriate management of the same can help them to accomplish their anticipated objective of amassing wealth at good liquidity positions. If the firms' resources are obstructed at diverse phases of the supply chain, this will lengthen

their cash operational cycle. Though this might surge their profitability due to the rise in sales, it might also influence their profitability negatively if the costs tied up in working capital surpass the gains of holding more inventory and/or granting more trade credits to clients. It is also recommended that non-financial firms listed on the Ghana Stock Exchange should project their sales and maintain adequate resources in accordance to their estimated sales level, so that, they will be able to make good negotiations when making cash purchases, and thus reduce costs.

It was established from the study that, liquidity proxied by the current ratio, quick ratio and the cash flow ratio had a positive link with the firms' financial performance as measured by ROA. This finding implies, the firms can improve their profitability positions by efficiently managing their liquid assets. Thus, if the firms' liquid assets are handled expertly, their final bottom lines are expected to improve significantly. It was also discovered that, liquidity surrogated by the current ratio, quick ratio and the cash flow ratio had no significant affiliation with the firms' financial performance as measured by ROE and ROCE. This is an indication that, an increase in liquidity did not significantly lead to an increase in the firms' financial performance as per ROE and ROCE. The study recommends that, factors such as seasonal changes in demand, firm size, manufacturing cycle and technological changes might have a greater influence on the firms' profitability. The firms should therefore factor these factors into their business decisions. In summary, if the firms are able to implement the recommendations outlined by this study, they are definitely going to have an improvement in their working capital positions, and with improved working capital positions, the firms will be able to utilise their capacities proficiently to quicken their economic growth.

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