RELATIONSHIP BETWEEN CORPORATE LIQUIDITY AND PROFITABILITY; EVIDENCE FROM QUOTED BREWERY COMPANIES ON THE GHANA STOCK EXCHANGE (GSE)

ASARE KWAKU ERIC

AMOAH LINDA

NIMO FRANCIS

GRAHAM CYNTHIA

BOATENG OWUSU KWAKU

A PROJECT WORK PRESENTED TO THE DEPARTMENT OF BUSINESS ADMINISTRATION IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF A BACHELOR OF BUSINESS ADMINISTRATION

(BACHELOR OF BUSINESS ACCOUNTING OPTION)

JUNE, 2013

STATEMENT OF AUTHENTICITY

We have read the university regulations relating to plagiarism and certify that this report is all our own work and do not contain any unacknowledged work from any other source. We also declare that we have been under supervision for this report herein submitted.

NAME	INDEX NUMBER	SIGNATURE	DATE
AsareKwaku Eric	10136305	…..……	……...……
Amoah Linda	10135135	……...……	……...……
Nimo Francis	10135103	……...……	……...……
Graham Cynthia	10140838	……...……	……...……
BoatengOwusuKwaku	10135063	……...……	……...……

SUPERVISOR'S DECLARATION

I hereby declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines on supervision laid down by Christian Service University College.

SUPERVISOR'S NAME

Rev. KwasiAddae -Baah …… ….……..

HEAD OF DEPARTMENT'S NAME

KwakuAhenkorah (Dr.) ……. ….……..

ABSTRACT

In this study the relationship between liquidity and profitability was investigated.
Using time series data, the study covered a period of five years between 2004 and 2008 on brewery companies listed on the Ghana stock exchange.
It was observed that from the multiple regressions analysis that total cash ratio (TCR) of 8% was maintained in the brewery industry over the period. Total liquidity ratio was also 29.7%.
Liquidity refers to a firm's ability to meet its short-term obligations when they fall due.
The performance in terms of profitability was evidenced by ROE, 22% and ROA, 9%.
This was not impressive; however, it goes to highlights the importance liquidity management can affect profitability. This trend was observed consistently over the period 2004 to 2008.
The study made some interesting revelations resulting from the Pearson's correlation analysis. We found that, ROE and ROA are positively correlated with total cash ratio and total liquidity ratio.
The positive correlation between liquidity and profitability variables indicates that if liquidity increases it will have a direct positive impact on profitability and vice versa.

The multiple regression models were highly significant. The coefficient of determination (R2) of 0.110 or 11% observed by model one (1) indicates that 11% of the variation in dependent variable (i.e. ROE) is partially explained by the variation in the independent variables.

Furtherance to this the coefficient of determination (R2) of 0.297 or 29.7% observed in model two (2) indicates that 29.7% of the variation in dependent variable (i.e. ROA) is explained by variation in the independent variables.

The above results have shown how liquidity management influenced positively the profitability of ABL and GGBL; hence effective management of that resource will have important implication on profitability.

The findings were consistent with earlier research conducted

Policy makers should have the interest in promoting efficient liquidity to promote performance management.

DEDICATION

This work is dedicated to the Almighty God for the wisdom given to us to out this research work successfully.

We also dedicate it to our families and lecturers for their support.

ACKNOWLEDGEMENT

In writing this research work, we collected materials from broad spectrum. We wish to express our sincere gratitude to Mr EricAppiahAdjei, thesis advisor and Rev. KwasiAddae-Baah of Business Studies Department, Christian Service University College (CSUC) who despite their tight schedule were able to find time to guide us.

To them, we say we are mostly grateful.

Finally, we wish to thank all those who in diverse ways helped to make this work a reality.

TABLE OF CONTENTS

CHAPTER ONE

INTRODUCTION

1.0BACKGROUND OF THE STUDY

Globalization is putting a lot of pressure on economies all the world to be competitive and expand to arrest the problem of poverty.In view of this, various governments have put programs and strategies in place to be competitive to ensure steady but sustainable growth and development, which is the only way to eradicate poverty.The Ghanaian economy, the structure of which according to Institute of Statistical, Social and Economic Research (ISSER 2006) is Agriculture 37.3% (with a growth rate of 5.7%), Industry/ Manufacturing 25.3% (with a growth rate of 7.3%), and the service sector 37.5% (with a growth rate of 6.5%), is no exception. The economy is mainly controlled by the private sector.

Therefore any program to expand the economy must embrace them. As emphasized by Green et al (2002), "in the last decade, most countries have shifted their development strategies towards a greater reliance on private companies and on the use of organized capital markets to finance these companies" Green et al (2002).The government of Ghana in this direction (the private sector led growth) lunched the golden age of business agenda in year 2000 to expand the economy.This resulted in a lot of legal, administrative and tax reforms among others to enhance the business or economic environment and climate as well as to enable the private sector retain significant portions of their earnings for expansion which will have a multiplier effect on the economy.

The economy, as a result of this, experienced steady and increasing real GDP growth, moving from 3.7% in 2000 to 6.2% in 2006. In addition recent estimates showed a significant decrease in poverty, with the head count falling from 51.7% in 1991-2 to 28.5% in 2005-6.In fact Ghana was rated as the best investment destination in sub- Saharan Africa, (Discussion Paper for Consultative Group (Ghana), Annual Development Partners meeting June 19, 2007)The above economic indicators have shown how the private sector can drive the growth of the economy.

Regardless of this, the sector is basseted with a lot of problems. Key amongst them is liquidity constraint. Liquidity was an instrumental factor during the recent financial crisis. As uncertainty led fundingsources to evaporate, many companies quickly found themselves short of cash to cover theirobligations as they came due. In extreme cases, banks (for example) in some countries failed or were forced intomergers. As a result, in the interest of broader financial stability, substantial amounts of liquiditywere provided by authorities in many countries, including Canada and the United States, Bernanke (2008).

In the aftermath of the crisis, there is a general sense that companies should improve upon their liquidity positions.

As such, policymakers have suggested that banks for example should holdmore liquid assets than in the past, to help self-insure against potential liquidity or fundingdifficulties. This has led to an international desire for common measures and standards forliquidity risk, culminating in ongoing work by the Basel Committee on Banking Supervision, BCBS (2010).

Since liquid assets such as cash and government securities generally have a relatively low return,holding them imposes an opportunity cost oncompanies. In the absence of regulation, it will be unreasonableto expect companiesto hold liquid assets to the extent that will jeopardize their quest to maximizing profitability.

That said, the aim of this study is not to establish the ideal level of liquid asset holdings, but rather to help distinguishempirically, whether companies holdings of liquid assets have a significant impact on theirprofitability.

1.1PROBLEM STATEMENT

In the aftermath of the 2007 global credit crisis, there is a general sense that companies had not fully appreciated the importance of liquidity risk management and the implications of such risk on profitability,Bordeleau et al (2010).

As such, policymakers have suggested that corporate entities for example should hold more liquid assets than in the past, to help reduce potential liquidity or funding difficulties. The problem also is that, liquid assets such as cash and government securities generally have a relatively low return, holding them imposes an opportunity cost on companies. It is argued that in the absence of regulation, it is reasonable to expect companies to hold liquid assets to the extent they think will optimize their firm's profitability. There is therefore the problem of matching liquidity with profitability which has been deepened by the recent credit crunch.This problem is further complicated by the fact that, this topical area of finance has not been widely or significantly explored in the Ghanaian context. To date, there is hardly muchempirical evidence

concerning the various aspect of working capital management and its various aspects using data relating solely to Ghanaian firms. Most of them were conducted in more advanced countries using data from those economies, hence doubts still remain on whether the conclusions reached would apply in the Ghanaian context, given the fragile business environment within which emerging economies like Ghana operates. This underlines the importance of research in working capital management, specifically association between corporate liquidity and profitability in diverse institutional environmentparticularly in a developing country like Ghana.

It is expected that the findings of this study will have important policy implications for Ghanaian firms. Therefore, this study attemptedto contribute to the dearth of knowledge on existing literature.

With this background,the aim of this studywas not to establish the ideal level of liquid asset holding, but rather to help distinguish empirically, in the first place, whether there is a significant relationship between profitability and liquidity, secondly to what extent,the increase or decrease in liquidity affects firm's performance.

1.2RESEARCH OBJECTIVES

Generally, the purpose of this study was to examine the relationship between firm's liquidity and performance using data from 2004 to 2008. The study further attempted to generate evidence on whether firm's profitability dependent on liquidity is significant. Specifically, the study tested empirically the association between cash ratio, liquid and acid test ratios on one hand with ROE, return on total capital and profit margin on the other hand.What distinguished this study from

other studies was that, it used accounting and market measures to measure the performance, using data from listed brewery companies from the Ghana stock exchange.

1.3 SPECIFIC OBJECTIVES

The study sought to:

1. Examine the relationship between liquidity and profitability.
2. Examine the extent to which liquidity affect profitability

1.4RESEARCH QUESTIONS

To provide answers to the study objectives the following questions were framed:

1. Do liquidity decisions have an impact on firm's profitability?
2. To what extent does the increase or decrease in liquidity affects firm's profitability?

1.5RESEARCH HYPOTHESIS

To answer the research questions, two main hypotheses were designed.

H_0: There is no significant relationship between liquidity andcompany profitability.

H_a: There is a significant relationship between liquidity and company profitability.

H_0: There is no significant change in firm's performance as a result of increase or decrease in liquidity

H_a: There is a significant change in firm's performance as a result of increase or decrease in liquidity

1.6 SCOPE OF THE STUDY

The study covered a period of five (5) years 2004 to 2008 on two brewery companies listed on the Ghana stock exchange, (GSE).

1.7SIGNIFICANCE OF THE STUDY

To the researchers it marked the beginning of efforts to adding to existing knowledge. For the academic world, this study shed some light on the liquidity management which has received prominence since the recent global credit crunch.For practitioners, this study was relevant to financial controllers, managers, directors particularly those working in brewery companies.It is expected that the findings of this study will have important policy implications.

1.8LIMITATION OF THE STUDY

The findings of this study are limited from the following aspects:

- The team encountered a lot of constraints relating to time, access to data and finance.
- This study includes only listed brewery companies in Ghana. Hence, its findings may not significantly apply to other firms not in the industry.

1.9ORGANIZATION OF THE STUDY

The study is organized into five (5) chapters.

Chapter one is introduction and significantly highlighted background to the study, problem statement, objectives of the study, scope, significance and limitations of the study.

Chapter two contained review of related literature and the conceptual framework of the study.

Chapter three explained the methods to be used for the study.

Chapter four contained the analysis of data collected.

Finally, Chapter five contained the key findings of the study, recommendations and conclusion.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

This chapter reveals a range of literature and concept relevant to the study. The chapter provides a critical analysis of the most relevant theories, from classical to modern approaches, also presenting the theoretical concept of the studied field, the definition of the main variables, as the main theories and researchers relating to the relationship between liquidity and profitability.

Profitability can be defined as the main form of measuring the economic success of a firm in terms of the capital invested in it. The economic success is determined by the extent of the net accounting profit.

According to Shim and Siegel (2000, pp. 46-47), accounting liquidity is the company's capacity to liquidate maturing short-term debt (within one year).

2.1 WORKING CAPITAL

Working capital is the relationship between a firm's short term assets (current assets) and its short-term liabilities. The level of investment in a firm's current assets is vital to its profitability and liquidity. The consideration of the level of investment in current assets should avoid two danger points-excessive and inadequate investments in current assets. Excessive investment in current assets should be avoided because it impairs a firm's profitability, as idle investment earns nothing. On the other hand inadequate amount of working capital can threaten solvency of the firm because of its inability to meet current obligations, Pandey, (2004).

Deloof (2003) argues that profit can be potentially maximized by the way working capital is managed. Working capital management involves the management of the component of current assets (Inventory, Receivables, Short term securities, bills receivables and cash) and current liabilities (Payables).(Raheman and Nasr,2007)

It is a common practice by business to want to increase sales without considering the level of investment in current assets since sales do not convert into cash instantaneously.

2.1.1 Determinants of Working Capital

Pandey, (2004) argues that there are no set rules or formulae to determine the working capital requirements of firms. He argues that, large number of factors, each having different importance, influence working capital needs of firms. Also, the importance of these factors changes for a firm over time. Therefore, an analysis of relevant factors should be made in order to determine total investment in working capital. The following is the description of factors which generally influence the working capital requirements of firms.

2.1.2 Nature of the Business

Working capital requirements of a firm are basically influenced by the nature of its business. Trading and financial firms have a very small investment in fixed assets, but require a large sum of money to be invested in working capital. Retail stores, for example, must carry large stocks of a variety of goods to satisfy varied and continuous demands of their customers. Some manufacturing businesses, such as tobacco manufacturers and construction firms, also have to invest substantially in working capital and a nominal amount in fixed assets. In contrast, public

utilities have a very limited need for working capital and have to invest abundantly in fixed assets. Their working capital requirements are nominal because they may have only cash sales and supply services, not products. Thus, no funds will be tied up in debtors and stock (inventories). Working capital requires most of the manufacturing concerns to fall between the two extreme requirements of trading firms and public utilities. Such concerns have to make adequate investment in current assets depending upon the total assets structure and other variables, Pandey, (2004)

2.1.3 Sales and Demand Condition

The working capital needs of a firm are related to its sales. It is difficult to precisely determine the relationship between volume of sales and working capital needs. In practice, current assets will have to be employed before growth takes place. It is, therefore, necessary to make advance planning of working capital for a growing firm on a continuous basis.

A growing firm may need to invest funds in fixed assets in order to sustain its growing production and sales. This will, in turn, increase investment in current assets to support enlarged scale of operations. It should be realized that a growing firm needs funds continuously. It uses external sources as well as internal sources to meet increasing needs of funds. Such a firm faces further financial problems when it retains substantial portion of its profits. It would not be able to pay dividends to shareholders. It is, therefore, imperative that proper planning be done by such companies to finance their increasing needs for working capital.

Sales depend on demand conditions. Most firms experience seasonal and cyclical fluctuations in the demand for their products and services. These business variations affect the working capital requirement, specially the temporary working capital requirement of the firm. When there is an upward swing in the economy, sales will increase; correspondingly, the firm's investment in inventories and debtors will also increase. Under boom, additional investment in fixed assets may be made by some firms to increase their productive capacity. This act of firms will require further additions of working capital. To meet their requirements of funds for fixed assets and current assets under boom period, firms generally resort to substantial borrowing. On the other hand, when there is a decline in the economy, sales will fall and consequently, levels of inventories and debtors will also fall. Under recessionary conditions, firms try to reduce their short-term borrowing.

Seasonal fluctuations not only affect working capital requirement but also create production problems for the firm. During period of peak demand, increasing production may be expensive for the firm. Similarly, it will be more expensive during slack periods when the firm has to sustain its working force and physical facilities without adequate production and sales. A firm may, thus, follow a policy of steady production, irrespective of seasonal changes in order to utilize its resources to the fullest extent. Such a policy will mean accumulation of inventories during offs and their quick disposal during the peak seasons.

The increasing level of inventories during the slack season will require increasing funds to be tied up in the working capital for some months. Unlike cyclical fluctuations, seasonal fluctuations generally conform to a steady pattern. Therefore, financial arrangements for seasonal working

capital requirements can be made in advance. However, the financial plan or arrangement should be flexible enough to take care of some abrupt seasonal fluctuations.

2.1.4 Technology and Manufacturing Policy

The manufacturing cycle (or the inventory cycle) comprises of the purchase and use of raw materials and the production of finished goods. Longer the manufacturing cycle, larger will be the firm's working capital requirements. For example, the manufacturing cycle in the case of a boiler, depending on its size, may range between six to twenty-four months. On the other hand manufacturing cycle of products such as detergents, powder, soaps, chocolate, etc, maybe a few hours. An extended manufacturing time span means a larger tie-up of funds in inventories. Thus, if there are alternative technologies of manufacturing a product, the technological process with the shortest manufacturing cycle may be chosen. Once a manufacturing technology has been selected, it should be ensured that manufacturing cycle is completed within the specified period. This needs proper planning and coordination at all levels of activity. Any delay in manufacturing process will result in accumulation of work-in-process and waste time. In order to minimize their investment in working capital, some firms, specifically firms manufacturing industrial products, have a policy of asking for advance payments from their customers. Non-manufacturing firms, service and financial enterprises do not have a manufacturing cycle.

A strategy of constant production may be maintained in order to resolve the working capital problems arising due to seasonal changes in the demand for the firm's product. A steady production policy will cause inventories to accumulate during the off-season periods and the firm will be exposed to greater inventory costs and risks. Thus, if costs and risks of maintaining a

constant production schedule are high, the firm may adopt a variable production policy, varying its production schedules in accordance with changing demand. Those firms, whose productive capacities can be utilized for manufacturing varied products, can have the advantage of diversified activities and solve their working capital problems. They will manufacture the original product line during its increasing demand and when it has an off-season; other products may be manufactured to utilize physical resources and working force. Thus, production policies will differ from firm to firm, depending on the circumstances of individual firm.

2.1.5 Credit Policy

The credit policy of the firm affects the working capital by influencing the level of debtors. The credit terms to be granted to customers may depend upon the norms of the industry to which the firm belongs. But a firm has the flexibility of shaping its credit policy within the constraint of industry norms and practices. The firm should use discretion in granting credit terms to its customers. Depending upon the individual case, different terms may be given to different customers. A liberal credit policy, without rating the credit –worthiness of customers, will be detrimental to the firm and will create a problem of collecting funds later on. The firm should be prompt in making collection. A high collection period will mean tie-up of large funds in book debts. Slack collection procedures can increase the chance of bad debts.

In order to ensure that unnecessary funds are not tied up in debtors, the firm should follow a rationalized credit policy based on the credit standing of customers and other relevant factors. The firm should evaluate the credit standing of new customers and periodically review the

creditworthiness of the existing customers. The case of delayed payments should be thoroughly investigated.

2.1.6 Avialabity of Credit

The working capital requirements of a firm are also affected by credit terms granted by its creditors. A firm will need less working capital if liberal credit terms are available to it. Similarly, the availability of credit from banks also influences the working capital needs of the firm. A firm, which can get bank credit easily on favorable conditions, will operate with less working capital than a firm without such a facility.

2.1.7 Operating Efficiency

The operating efficiency of the firm relates to the optimum utilization of resources at minimum costs. The firm will be effectively contributing in keeping the working capital investment at a lower level if it is efficient in controlling operating costs and utilizing current assets. The use of working capital is improved the pace of cash conversion cycle is accelerated with operating efficiency. Better utilization of resources improves profitability and, thus, helps in releasing the pressure on working capital. Although it may not be possible for a firm to control prices of materials or wages of labor, it can certainly ensure efficient and effective use of its materials, labor and other resources.

2.1.8 Price Changes Level

The increasing shifts in price level make functions of financial manager difficult. He should anticipate the effect of price level changes on working capital requirements of the firm.

Generally, rising price levels will require a firm to maintain higher amount of working capital. Same levels of current assets will need increased investment when prices are increasing. However, companies which can immediately revise their product prices with rising price levels will not face a severe working capital problem. Further, effects of increasing general price level will be felt differently by firms as individual prices may move differently. It is possible that some companies may not be affected by rising prices while others may be badly hit by it. Thus, effect of rising prices will be different for different companies. Some will face no working capital problem, while working capital problems of others may be aggravated.

2.2TYPES OF WORKING CAPITAL

The operating cycle is a continuous process and, therefore, the need for current assets is felt constantly. But the magnitude of current assets needed is not always the same, it increases and decreases over time. However, there is always a minimum level of current assets which is continuously required by the firm to carry on its business operations. This minimum level of current assets is referred to as permanent, or fixed, working capital, (Pandey I.M, 2004)

It is permanent in the same way as the firm's fixed assets are. Depending upon the changes in production and sales, the need for working capital over and above permanent working capital, will fluctuate. For example, extra inventory of finished goods will have to be maintained to support the peak periods of sale and investment in receivable may also increase during such periods. On the other hand investment in raw material, work-in-process and finished goods will fall if the market is slack.

The extra working capital, needed to support the changing production and sales activities is called fluctuating, or variable, or temporary working capital. Both kinds of working capital-permanent and temporary-are necessary to facilitate production and sale through the operating cycle, but temporary working capital are created by the firm to meet liquidity requirements that will last only temporarily. Figure 1.0 illustrates difference between permanent and temporary working capital. It is shown that permanent working capital is stable over time, while temporary working capital is fluctuating-sometimes increasing and sometime decreasing. However, the permanent working capital line need not be horizontal if the firm's requirement for permanent capital is increasing (or decreasing) over a period.

2.3FINANCING CURRENT ASSETS

Pandey(2004) acknowledged that, three types of financing current assets are available and they are as follows:

2.3.1 Long-Term Financing

The sources of long-term financing include ordinary share capital, preference share capital, debentures, long-term borrowings from financial institutions and reserves and surplus (retained earnings).

2.3.2 Short-Term Financing

The short-term financing is obtained for a period less than one year. It is arranged in advance from banks and other suppliers of short-term finance in the money market. Short-term finances

include working capital funds from banks, public deposits, commercial paper, factoring of receivable etc.

2.3.3 Spontaneous Financing

Spontaneous financing arisesfrom the normal course of business. Trade and other outstanding expenses are examples of spontaneous financing. There is no explicit cost of spontaneous financing. A firm is expected to utilize these sources of finance to the fullest extent. The real choice of financing current assets, once the spontaneous sources of financing have been fully utilized, is between the long-term and short-term sources of finances.

2.4LIQUIDITY VERSUS PROFITABILITY: RISK-RETURN TRADE-OFF

The firm would make just enough investment in current assets if it were possible to estimate working capital needs exactly. All things being equal, excess investment in current assets will not earn enough return, but will increase cost of holding inventory for example, in terms of security cost, storage, handling equipment among others. A smaller investment in current assets, on the other hand, would mean interrupted production and sales, because of frequent stock-outs and inability to pay for credits on due dates due to restrictive policy.

As it is not possible to estimate working capital needs accurately, the firm must decide about levels of current assets to be carried. Given a firm's technology and production policy, sales and demand conditions, operating efficiency etc., its current assets holdings will depend upon its working capital policy.

A firm may follow a conservative or an aggressive policy. These policies involve risk-return trade-offs. A conservative policy means lower return and risk, while an aggressive policy produces higher return and risk.

The two important aims of the working capital management are: profitability and solvency. Solvency, used in the technical sense, refers to the firm's continuous ability to meet maturing obligations. Lenders and creditors expect prompt settlements of their claims as and when due. To ensure solvency, the firm should be very liquid, which means larger liquid current assets holdings. If the firm maintains a relatively large liquid investment in current assets, it will have no difficulty in paying claims of creditors when they become due and will be able to fulfill all sales orders and ensure smooth production.

Thus, a liquid firm has less risk of insolvency; that is, it will hardly experience cash shortage or stock-out situation. However, there is a cost associated with maintaining sound liquidity position. A considerable amount of the firm's funds will be tied up in liquid current assets, and to some extent this investment earns little returns, hence profit is jeopardized.

To have higher profitability, the firm may sacrifice solvency and maintain a relatively low level of liquid current assets, but its solvency would be threatened and would be exposed to greater risk of cash shortage and stock outs.Hence balance between liquidity and profitability is very difficult to achieve, hence it is can be describe as a puzzle.

2.5 EMPIRICAL STUDY ON THE RELATIONSHIP BETWEEN LIQUIDITY AND PROFITABILITY

The most popular study into the relevance and or irrelevance of liquidity and profitability in corporate financing was conducted by Bordeleau et al (2010), who cited (Longworth 2010; Bernanke 2008) and reiterated their argument which among others contend that Liquidity was an instrumental factor during the late 2007 financial crisis. As uncertainty led funding sources to evaporate, many corporate bodies quickly found themselves short on cash to cover their obligations as they fell due. In extreme cases, banks in some countries failed or were forced into mergers. As a result, in the interest of broader financial stability, substantial amounts of liquidity were provided by political authorities in many countries, including Canada and the United States.

A recent paper by Morris and Shin (2010) where the total credit risk of a bank was decomposed into "insolvency risk" and "illiquidity risk", the authors concluded that an increase in the liquidity ratio of a bank decreases the probability.

Following closely, Olagunju, A.; Adeyanju O. D. and Olabode O. S. (2011) in another study had attempted to investigate liquidity management and commercial banks profitability with focus on commercial banks in Nigeria. It was observed from the findings from the testing of hypothesis that there is significant relationship between liquidity and profitability. That means profitability in commercial banks is significantly influenced by liquidity and vice versa.

Lazardidis and Tryfonidis (2006) have investigated the relationship between profitability and working capital management in the Stock Exchange Market of Athens throughout 2001-2004. The objective of this research was to study the relationship between profitability and the cycle of

cash transformation and its components. Results indicate that a significant relationship exists between gross operational profit and the cash transformation cycle. Moreover managers can generate a good profit for the company using the right management techniques for the cash transformation cycle and its components.

Nazir and Afza (2009) have studied the relationship between profitability and working capital management policies in 208 companies listed in Tehran Stock Exchange throughout the years 1998-2005. Results have shown that managers using conservative strategies have been able to increase the value of their stocks. Findings indicate that in selecting a portfolio, investors choose companies that apply short term credit policies and retain a low level of current liabilities.

Zubiri (2010) studied the impact of working capital management on company profitability in a research performed on the automobile production industry in Pakistan from 2000 to 2008. The researcher has used current ratio as an indicator for working capital management policies and financial leverage as the indicator for capital structure. Variables in this research were tested using the correlation coefficient and multi variable regression. Results of the research indicate that companies must increase current assets and decrease current liabilities to maximize profitability. Findings reflect that the increase in cash flow would result in an increase in profitability.

Nobanee, Abdollatif and Alhajjar (2010), studied the relationship between the cash conversion cycle and profitability. To perform this research, they used data gathered from Japanese

companies between the years 1990-2004. Results indicated that a negative relationship existed between profitability and the cash transformation cycle.

Chatreji (2010) studied the impact of working capital management on profitability in companies listed on London stock exchange throughout the years 2006-2008. The researcher has used the Pearson correlation coefficient to evaluate the impact of cash transformation cycle, the period of collection of receivables, inventory retention period, liability settlement period, the current to quick ratio, to net operational profit. Results indicated that a negative relationship exists between working capital management and profitability. This means that an increase in cash transformation cycle would result in a reduction in profitability. Moreover results have also stated that a negative relationship exists between liquidity and profitability as well.

The above have shown that studies on liquidity and its impact on profitability are inconclusive. From the above empirical evidence, the significance of the relationships is inconclusive. Doubt also remains as to whether, the findings from these studies can straight away be applied in Ghana given the fact that they were all conduct in a more advanced countries where the economic and business environment are more stable as compared to Ghana. Hence the researcher is motivated by this gap.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0INTRODUCTION

The chapter defines the methodology for this study. More specifically, it describes the data source, description and explanation of the variables as well as the measurement of the variables, and research questions with respective hypotheses. The chapter also focuses on the procedure, analysis and research design. To this effect, a robustness check is also conducted. The objective of this chapter is to develop a model that measures the impact of liquidity on the profitability of listed brewery companies in Ghana.

3.1TYPES OF RESEARCH

Research can be categorized into exploratory, descriptive, and explanatory (causal). Explanatory (causal) study is a valuable means of looking at cause and effect relationships between variables. It is mostly found in quantitative studies. Descriptive research seeks to describe characteristics of a population or phenomenon. The object of descriptive research is to portray an accurate profile of persons, events or situations. Exploratory research is undertaken to gain better understanding of the dimension of a problem. Exploratory study is a valuable means of finding out what is happening; to seek new insights; to question and to assess phenomena in a new light. It is particularly useful to clarify an understanding of a problem, Saunders, et al (2007).

Based on this explanation, this study is an explanatory research.

This study aimed to provide a status on the extent to which a firm's performance may differ and how the value of firm changes as a result of efficient management of its liquidity.

3.2DATA CONSIDERATION AND SOURCES

To study the impact of liquidity management on the profitability of brewery companies listed on the GSE, this study analyzed Accra Brewery Company Ltd (ABL) and Guinness Ghana Brewery Company Ltd (GGBL) financial data for the period 2004 to 2008.

This study used only secondary data, which are essentially from the said listed companies statement of financial position (balance sheet) and statement of comprehensive income (income statements) from 2004 to 2008.

The study used time series data. Time series analysis identifies the nature of phenomenon represented by the sequence of observation and forecast the future and observes a trend. Saunders et al (2007) used time series data to measure the financial performance of firms in the Macedonia's banking system.

3.3DESCRIPTION AND EXPLANATION OF VARIABLES

3.3.1 Dependent Variables

Three dependent variables were use in this study. The data for the dependent variables—return on Asset (ROA), and Return on Equity (ROE) —came from the annual balance sheets and income statements. The ROA is defined as the profit before tax divided by total assets. The

return on Equity (ROE) is also defined as the ratio of pre-tax profit to total Equity capital. This is a common and widely accepted measure of Return in the accounting and finance literature. These dependent variables were measured in Ghana New Cedis.

3.3.2 Independent Variables

Independent Variables for the study were; Total cash ratio (TCR) which is the ratio of total cash balance to current liabilities, liquidity ratio (LR) is the ratio of all the cash holdings plus all short term investments to current liabilities.

3.4RESEARCH QUESTIONS

This study addressed two research questions. The first describes the relevancy of liquidity management and firm performance. The second research question determines the extent to which the increase or decrease in liquidity affect firm's profitability.

3.5RESEARCH HYPOTHESIS

To answer the research questions, two main hypotheses were designed;

$H_{o1:}$ There is no significant relationship between liquidity and profitability as measured by Return on Assets (ROA), and Return on Equity (ROE).

$H_{A1:}$ There is a significant relationship between a firm's liquidity and profitability as measured by Return on Assets (ROA) and Return on Equity (ROE).

$H_{o2:}$ There is no significant change in firm's profit as a result of increase or decrease in liquidity.

$H_{A2:}$ There is a significant change in a firm's profit as a result of increase or decrease in liquidity.

The standard for the rejection of the null hypothesis was a determination of statistical significance at the $p > 0.05$ level of probability.

3.6 DATA CODING

As noted earlier, the data were collected from the balance sheet and the income statement of ABL and GGBL, after which various ratios were computed, and coded into variable using definitions given earlier in this chapter. The two variables were sorted based on the researcher's calculations and was entered into Excel tables and later exported to SPSS software for statistical analysis.

3.7DATA ANALYSIS PROCEDURE

To summarize the data and describe the central tendency of the variables and variability within the values, descriptive analysis was used. Pearson correlation was used to determine whether there was a relationship between the variables. Correlation analysis is a statistical tool that was used in this study to describe the degree to which one variable is linearly related to another. Through conducting correlation analysis this study was able to identify the degree of association among the variables.

The standard for the rejection of the null hypothesis was a determination of statistical significance at the **p > 0.05** level of probability.

Multiple regression analysis was used to analyze the linear relationship between the dependent and independent variables.

Maddala (1988) defines multiple regression as a model in which the dependent variable depends on two or more variables.

3.8RESEARCH DESIGN

For empirical purposes, the following operationalization equations were used. Nobanee, Abdollatif and Alhajjar (2010), studied the relationship between the cash conversion cycle and profitability. To perform this research, they used data gathered from Japanese companies between the years 1990-2004. Results indicated that a negative relationship existed between profitability and the cash transformation cycle.

The Nobanee, Abdollatif and Alhajjar (2010) model in their study to investigate the impact of cash conversion cycle on profitability in Japan was adopted and modified to serve as a framework for the model development. This study also estimated the model in linear form. The full model used for testing the listed brewery companies' performance in relations to their liquidity was as follows:

$$Y_{1,,i,t} = \alpha_i + \beta_1 X_{1,i,t} + \beta_2 X_{2,i,t} + u_i$$

This was then modified as follows:

$$ROA_{2,,i,t} = \alpha_i + \beta_1 TCR_{,i,t} + \beta_2 LR_{,i,t} + u_i \text{(model.2.)}$$

Where TCR = total cash ratio

LR = liquidity ratio

ROA = return on asset

u_i = error term

$$ROE_{1,i,t} = \alpha_i + \beta_1 TCR_{,i,t} + \beta_2 LR_{,i,t} + u_i \text{(model.1)}$$

To investigate the extent to which changes in liquidity affect firm's ROE, model .1 was developed.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.0 INTRODUCTION

This chapter discusses the analysis of the empirical results. It begins by looking at the descriptive statistics and then the regression analysis.

4.1 DESCRIPTIVE STATISTICS

The descriptive statistics as shown in tables 4.1 has made some important observations relating to the two models that were run. It noted that, total cash ratio (TCR) of 8% of current liabilities were maintained in the brewery industry over the period. Total liquidity ratio was also 29.7% of current liabilities, which was encouraging. Liquidity refers to a firm's ability to meet its short-term obligations when they fall due.

The performance in terms of profitability evidenced by this style of working capital management was ROE, 22% and ROA, 9%.This was not impressive; however, it goes to highlights the importance of how efficient working capital management can impact on profitability.This trend was observed consistently over the period 2004 to 2008

Table 4.1.1 MODEL 1

DESCRIPTIVE STATISTICS

	Mean	Std. Deviation	N
ROE	.2200	.17029	10
TCR	.0860	.10178	10
TLR	.2970	.52593	10

Table 4.1.2 MODEL 2

DESCRIPTIVE STATISTICS

	Mean	Std. Deviation	N
ROA	.0910	.06402	10
TCR	.0860	.10178	10
TLR	.2970	.52593	10

Tables 4.2, provides the Pearson correlation for the variables that were used in the regression model. Pearson's correlation analysis was used to find the relationship between working capital

management, specifically cash and liquidity and ROE and ROA. We found that, ROE and ROA are positively correlated with total cash ratio and total liquidity ratio.

The positive correlation between working capital and profitability variables indicates that if working capital increases it will have a direct positive impact on profitability and vice versa.

Table 4.2.1 MODEL 1

CORRELETION

		ROE	TCR	TLR
Pearson Correlation	ROE	1.000	.328	.150
	TCR	.328	1.000	.328
	TLR	.150	.328	1.000
Sig. (1-tailed)	ROE	.	.177	.340
	TCR	.177	.	.177
	TLR	.340	.177	.
N	ROE	10	10	10
	TCR	10	10	10
	TLR	10	10	10

Table 4.2.2 MODEL 2

CORRELETION

		ROA	TCR	TLR
Pearson Correlation	ROA	1.000	.328	.278
	TCR	.531	1.000	.328
	TLR	.278	.328	1.000
Sig. (1-tailed)	ROA	.	.057	.219
	TCR	.057	.	.177
	TLR	.219	.177	.
N	ROA	10	10	10
	TCR	10	10	10
	TLR	10	10	10

Table 4.3 MULTIPLE REGRESSION AND ANALYSIS RESULT

Model	DEP V	IND V	Slope/ Coefficient (β)	Sig	R^2	Durbin Watson	VIF
1	ROE	TCR	0.523	.043	.110	2.425	1.121
		TLR	0.015	.304			1.121
2	ROA	TCR	0.310	.186	.294	2.549	1.121
		TLR	0.014	.040			1.121

A regression analysis was performed on the dependent and independent variables to check on the existence of the multi-co linearity problem. In a multiple regression model, multicollinearity exists when two independent variables are perfectly correlated with each other. The result is shown in the Table 4.3 above.

As a rule of thumb a variable inflation factor (VIF) in excess of 5 is considered an indication of harmful multi-co linearity, Zikmund et al (2010). All the VIF are less than 5 and the average VIF is 1.121 therefore it can be said that there is no multi-co linearity problem for the models.

The results of the regression analysis can therefore be interpreted with a greater degree of confidence.The Durbin -Watson statistic was also used to test for autocorrelation. The Durbin-Watson value of 2.425 and 2.549 indicates that the data has no serial correlation or autocorrelation problem.

The multiple regression models were highly significant. The coefficient of determination (R^2) of 0.110 or 11% observed by model one (1) indicates that 11% of the variation in dependent variable (i.e. ROE) is explained by variation in the independent variables.

Furtherance to this the coefficient of determination (R^2) of 0.294 or 29.4% observed in model two (2) indicates that 29.4% of the variation in dependent variable (i.e. ROA) is explained by variation in the independent variables.

The above results have shown how working capital management will impact positively on the profitability of ABL and GGBL, hence effective management of that resource will have important implication on them.

The above results and findings is consistent with earlier research or studies conducted by Lazardidis and Tryfonidis (2006), Nazir and Afza (2009), Zubiri (2010), Nobani, Abdollatif and Alhajjar (2010), Chatreji (2010), Hassanpoor (2007).

CHAPTER FIVE

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0INTRODUCTION

To some extent liquid investment earns little returns, hence profit is jeopardized. To have higher profitability, the firm may sacrifice solvency and maintain a relatively low level of liquid current assets. Hence balance between liquidity and profitability is very difficult to achieve. To date, there is hardly much empirical evidence concerning liquidity management and its various aspects using data relating solely to Ghanaian firms thus, the importance of research into liquidity management and its relationship with profitability in a developing country like Ghana.

In this chapter, we consider the key findings of the study and their implications, followed by conclusions and the researchers' recommendations.In this study the impact that liquidity management has on profitability was investigated. Descriptive statistics were used in this quantitative research using secondarydata from the listed Brewery companies (ABL and GGBL) on the GSE from the period 2004 - 2008. The research objectives were:

- Examine the relationship between liquidity and profitability.
- Examine the extent to which liquidity affect profitability

5.1 KEY FINDINGS

- Total cash ratio (TCR) of 8% was maintained in the brewery industry over the period. Total liquidity ratio was also 29.7%, which was encouraging.
- Performance in terms of profitability was ROE, 22% and ROA, 9%.

- This was not impressive; however, it goes to highlights the importance of how efficient liquidity management can impact on profitability.
- ROE and ROA were found to be positively correlated with total cash and liquidity ratio.
- The positive correlation between liquidity and profitability indicates that if liquidity increases it will have a direct positive impact on profitability or vice versa
- Coefficient of determination (R^2) of 0.110 or 11% observed by model 1 indicates that 11% of the variation in dependent variable ROE is partially accounted for by the variation in liquidity and cash ratios.
- Secondly, R^2 of 0.297 or 29.7% observed in model 2 indicates that 29.7% of the variation in ROA is partially explained by the variation in liquidity and cash ratios.

The findings were consistent with earlier research or studies conducted by Lazardidis and Tryfonidis (2006), Nazir and Afza (2009), Zubiri (2010), Nobani, Abdollatif and Alhajjar (2010), Chatreji (2010), Hassanpoor (2007).

5.2CONCLUSION

The study investigated the relationship between liquidity management and profitability. Using secondary data with ABL AND GGBL as evidence, it was noted that cash and liquidity ratios are positively related with profitability. The study was observed to be consistent with other studies conducted by Lazardidis and Tryfonidis (2006), Nazir and Afza (2009), Zubiri (2010), Nobani, Abdollatif and Alhajjar (2010), Chatreji (2010), Hassanpoor (2007).

5.3RECOMMENDATION

- Policy makers should have the interest in promoting efficient management of liquid assets to promote profitability.
- It should therefore be the burning desire of top management of every firm tomake prudent liquidity decision, which is part of working capital financing in order to remain profitable and competitive.
- Hence managers should know how and what liquidity structure will influence their performance.

REFERENCES

A Note on Working Capital Management and Corporate Profitability of Japanese Firmsand Firm's Performance of Japanese Firms ", www.ssrn.com

BCBS (2010) Basel Committee on Banking Supervision; Risk Management Group of the Basel Committee on Banking Supervision, Switzerland

Bernanke, B. S. (2008) Liquidity Provision by the Federal Reserve, Risk Transfer Mechanisms and Financial Stability.

Bordeleau, E. and Graham, C. (2010).The Impact of Liquidity on Bank Profitability. Bank of Canada Working Paper 2010-38

Corporate Financial Structure in India. Economic Research Paper No. 02/4. Centre for International, Financial and Economics Research,

Corporate Profitability of Japanese Firms", www.ssrn.com

Department of Economics, Loughborough University, Loughborough.

Does Working Capital Management Affect Profitability of Belgian Firms.

Green, C.J., V. Murinde and J. Suppakitjarak. 2002.

H. Jamal Zubiri (2010)

H. Jamal Zubiri .2010." Impact of Working Capital Management and Capital Structure on HaithamNobanee and Maryam Alhajjar (2009)

HaithamNobanee and ModarAbdullatif and Maryam Al Hajjar (2010)

HaithamNobanee and Wasim K. AlShattarat and Ayman E. Haddad (2009)

Hassanpour, Shiva (2007)

Hassanpour, Shiva. 2007. "Impact of Working Capital Strategies on Stock Return", A Master's

Impact of Aggressive Working Capital Management Policy on Firms' Profitability

Impact of Working Capital Management and Capital Structure on Profitability of Automobile Firms in Pakistan

Impact of Working Capital Strategies on Stock Return

Institute of Statistical Social and Economic Research 2006 Review of the national economy

Is it Better to be Aggressive or Conservative in Managing Working Capital?

Lazaridis, Loannis. Tryfonidis, Dimitrois. (2006)

Lazaridis, Loannis. Tryfonidis, Dimitrois.2006." Relationship BetweenWorking Capital

Main Sajid, Nazir and TalatAfza .(2009)

Management and Profitability of Listed Companies in the Athens Stock Exchange"

Managing Working Capital? ", www.ssrn.com

Marc Deloof.(2000)

Mark Saunders; Philip Lewis; AndrianThornhill

Nazir, Main Sajid and Afza, Talat . (2007).

Nazir, Main Sajid and Afza, Talat .2007." Is it Better to be Aggressive or Conservative in

Nobanee, H. and Alhajjar, M. (2010)." A Note on Working Capital Management and

Nobanee, H. and ModarAbdullatif and Maryam Al Hajjar .2010."Cash Conversion Cycle

Nobanee, H. and Wasim, K. AlShattarat and Ayman E. Haddad .2009."Optimizing

Olagunju, A.; Adeyanju O. D. and Olabode O. S. (2011), Liquidity Management and Commercial Banks Profitability in Nigeria, Journal of Finance and Accounting 2(7/8)

Optimizing Working Capital Management.

Pandey I.M. (2004) Financial Management 8th ed. Vikas publishing

Profitability of Automobile Firms in Pakistan",www.ssrn.com

Relationship between Working Capital Management and Profitability of Listed Companies in the Athens Stock Exchange

SaswataChatterjee (2010)

Saunders M, Lewis P. Thornhil (2007) Research Methods for Business students 4 ed. Prentice Hall.

Shim and Siegel (2000, pp. 46-47).

The Impact of Working Capital Management on the Profitability of the Listed Companies in the London Stock Exchange

Thesis, ShahidBeheshti University.

Working Capital Management", www.ssrn.com

APPENDIX 1

Regression

MODEL 2

Descriptive Statistics

	Mean	Std. Deviation	N
ROE	.2200	.17029	10
TC	.0860	.10178	10
TL	.2970	.52593	10

Correlations

		ROE	TC	TL
Pearson Correlation	ROE	1.000	.328	.150
	TC	.328	1.000	.328
	TL	.150	.328	1.000
Sig. (1-tailed)	ROE	.	.177	.340
	TC	.177	.	.177
	TL	.340	.177	.
N	ROE	10	10	10
	TC	10	10	10
	TL	10	10	10

Sig. (1-tailed)	ROE	.	.177	.340
	TC	.177	.	.177
	TL	.340	.177	.
N	ROE	10	10	10
	TC	10	10	10
	TL	10	10	10

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	df1	df2
1	.331[a]	.110	-.145	.18219	.110	.431	2	7

a. Predictors: (Constant), TL,TC

b. Dependent Variable: ROE

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.029	2	.014	.431	.666[a]
	Residual	.232	7	.033		
	Total	.261	9			

a. Predictors: (Constant), TL,TC

b. Dependent Variable: ROE

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence I
		B	Std. Error	Beta			Lower Bound
1	(Constant)	.170	.079		.049	.069	-.017
	TC	.523	.632	.313	.028	.043	-.970
	TL	.015	.122	.047	.125	.304	-.274

a. Dependent Variable: ROE

CollinearityDiagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	TC	TL
1	1	2.154	1.000	.08	.08	.09
	2	.514	2.047	.23	.08	.88
	3	.332	2.548	.69	.83	.03

a. Dependent Variable: ROE

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.1705	.3428	.2200	.05641	10
Residual	-.24046	.30016	.00000	.16068	10
Std. Predicted Value	-.878	2.177	.000	1.000	10
Std. Residual	-1.320	1.647	.000	.882	10

a. Dependent Variable: ROE

Regression

MODEL 1

Descriptive Statistics

	Mean	Std. Deviation	N
ROA	.0910	.06402	10
TC	.0860	.10178	10
TL	.2970	.52593	10

Correlations

		ROA	TC	TL
Pearson Correlation	ROA	1.000	.531	.278
	TC	.531	1.000	.328
	TL	.278	.328	1.000
Sig. (1-tailed)	ROA	.	.057	.219
	TC	.057	.	.177
	TL	.219	.177	.
N	ROA	10	10	10
	TC	10	10	10
	TL	10	10	10

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	df1	
1	.542[a]	.294	.092	.06100	.294	1.457	2	

a. Predictors: (Constant), CL,TL

b. Dependent Variable: ROA

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.011	2	.005	1.457	.296[a]
	Residual	.026	7	.004		
	Total	.037	9			

a. Predictors: (Constant), TC, TL

b. Dependent Variable: ROA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95% Confidence I
		B	Std. Error	Beta			Lower Bound
1	(Constant)	.060	.027		.064	.058	-.003
	TC	.310	.211	.493	.066	.186	-.190
	TL	.014	.041	.116	.045	.040	-.083

a. Dependent Variable: ROA

CollinearityDiagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	TC	TL
1	1	2.154	1.000	.08	.08	.09
	2	.514	2.047	.23	.08	.88
	3	.332	2.548	.69	.83	.03

a. Dependent Variable: ROA

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.0601	.1639	.0910	.03471	10
Residual	-.10015	.06575	.00000	.05380	10
Std. Predicted Value	-.889	2.100	.000	1.000	10
Std. Residual	-1.642	1.078	.000	.882	10

a. Dependent Variable: ROA

APPENDIX 2

		IND VAR		DEP VAR	
COMPANY	FIRM	TC/CL	TL/CL	OP/E	OP/TA
		X1	X2	Y1	Y2
Accra Brewery	1	0.00	0.01	0.13	0.06
GGBL	2	0.09	0.19	0.36	0.14
Accra Brewery	1	0.00	0.01	0.03	0.01
GGBL	2	0.12	1.75	0.22	0.11
Accra Brewery	1	0.00	0.00	-0.07	-0.04
GGBL	2	0.07	0.17	0.35	0.15
Accra Brewery	1	0.01	0.01	0.16	0.08
GGBL	2	0.18	0.33	0.31	0.13
Accra Brewery	1	0.32	0.32	0.20	0.12
GGBL	2	0.07	0.18	0.51	0.15

APPENDIX 3

Accra Brewery	14,911	11167	25219	26954	24	78	1501	0.13	0.06
GGBL	66006	62165	164441	155403	6070	12369	22277	0.36	0.14
Accra Brewery	13191	10530	24504	24232	24	78	293	0.03	0.01
GGBL	40347	64394	124848	132627	5010	70739	14061	0.22	0.11
Accra Brewery	109361	101926	198949	216509	355	355	-7600	-0.07	-0.04
GGBL	647870	519382	1047599	1202711	46069	110798	182833	0.35	0.15
Accra Brewery	91192	104397	198246	204142	794	797	16327	0.16	0.08
GGBL	463366	438153	799452	1001978	85143	150872	134008	0.31	0.13
Accra Brewery	61819	94397	183909	162485	19888	19891	19197	0.20	0.12
GGBL	235788540	134743531	527211260	459768233	15774391	42836005	68597247	0.51	0.15

APPENDIX 4

APPENDIX 4: GSE DATA & RATIOS

2008

S/N	COMPANY	S.T.Debt	L.T.Debt	T.debt	Equity	SALES	T.ASSSET	T
1	Accra Brewery	14,911	876	15,787	11167	25219	26954	
2	African Champion Ind LTD	1543759	0	1543759	5971491	3008861	8515250	
3	Anglogold	4679	870	5549	2515	3619	8060	
4	Aluworks	0	0	0	0	0	0	
5	Ayrton Drugs	1115885	0	1115885	9332960	11902564	10448845	
6	Benso oil	1914	0	1914	19984	20589	21898	
7	Cal Bank	301474	0	301474	37428	34934	338902	
8	Camelot	1104470	1594090	2698560	520012	2567625	2354572	
9	CFAO	20884266	0	20884266	7488749	49517015	24449703	
10	Clydestone	1103578	0	1103578	239950	1452599	1343528	
11	Cocoa processing	12502118	85484436	97986554	84045281	59264796	182031835	
12	Ecobank	769391	65566	834957	84738	134901	919695	
13	EIC	7819	8241	16060	43926	4824	59986	
14	Ecobank Transnational inc	7148564	0	7148564	1157622	656539	8306186	
15	Fan Milk	10640	808	11448	21410	55041	32858	
16	GCB	1442471224	0	1442471224	207749124	187046013	1650220348	
17	GGBL	66006	27232	93238	62165	164441	155403	6
18	Goil	54723507	14568522	69292029	24784330	438820228	94076359	
19	Golden Star Resources	90322	175810	266132	430070	257355	696202	
20	Golden Web	638184	665145	1303329	485924	532044	1789253	
21	HFC bank	298049791	52110964	350160755	28829684	40654093	378614305	
22	Mechanical Lloyds	12479959	3182862	15662821	13525285	25894929	29188106	
23	Pioneer Kitchenware	1113588	35851	1149439	1277282	2876993	2426721	
24	PBC	52494640	7619606	60114246	7353415	245478455	52724179	
25	PZ	15858859	1530759	17389618	20970926	42775342	38360544	
26	Sam Woode	829104	234122	1063226	589797	2252688	1653023	
27	SG SSB	367093803	0	367093803	69671327	71352357	436495130	
28	SIC	141695612	3562081	145257693	66315734	6538743	211573427	
29	Standard Chartered	894585	898	895483	89461	117115	984944	
30	Starwin	880865	542622	1423487	2166612	2468314	3590099	
31	Total Petroleum	87070	5500	92570	55581	566514	148151	

32	Transaction Solutions	1545456	372355	1917811	1652632	12131936	3570443
33	Trust Bank (Gambia)	2488943	0	2488943	270188	329760	2759131
34	Unilever	47704	25412	73116	56358	165590	129474
35	UT Bank	110945	0	110945	16878	48588	127823