

**LIQUIDITY AND PROFITABILITY: EMPIRICAL EVIDENCE FROM LISTED  
BANKS IN GHANA**

**by**

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## DECLARATION

I hereby declare that this submission is my own work towards the award of MBA and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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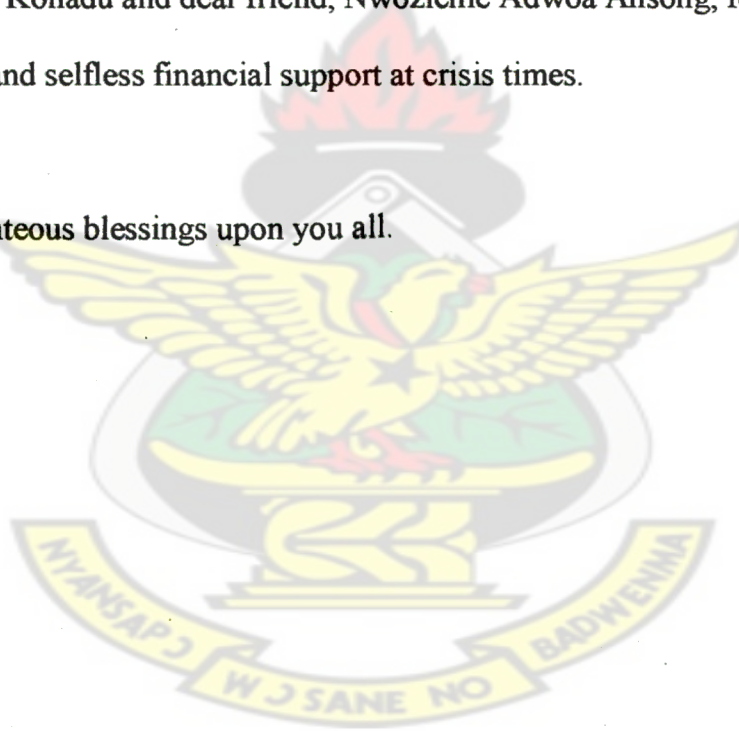
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## DEDICATION

The researcher sincerely and deeply dedicates this study to his father, Mr. Isaiah Tawiah Mensah, for his prayers and willingness to support his sudden decision to embark on this MBA program and unflinchingly supporting him financially, especially, for sacrificing part of his pension pay to cater for his registration in the first year.

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May God shower his bounteous blessings upon you all.



## **ABSTRACT**

Since profitability is related to the goal of shareholder wealth maximization, investment in current assets should be made only if an acceptable return is obtained. While liquidity is needed for a company to continue in business, a company may choose to hold more cash than is needed for operational or transaction needs, for example for precautionary or speculative reasons. The problem is that increasing profits at the cost of liquidity can bring serious problems to the firm. Hence, banks that do not care about profit and liquidity cannot survive for a longer period and may face the problem of insolvency or bankruptcy. As a result, this study empirically examined the effect of liquidity on profitability of banks listed on the Ghana stock exchange from 2002 to 2006 accounting years. The liquidity ratios employed include current ratio, quick ratio, cash ratio and net operating cash flow ratio whereas the profitability ratios comprise net profit margin, return on equity, return on asset and net asset turnover ratios. Using trend analysis, the researcher found that the liquidity ratios, Quick ratio and Net operating cash flow ratio of SCB and CAL only had a positive relationship with profitability ratios ROA and Net Asset Turnover respectively. Therefore, this research paper concludes in support of the alternate hypothesis that there is a negative relationship between liquidity and profitability in the banking sector in Ghana and rejects the null hypothesis.



# **LIQUIDITY AND PROFITABILITY: EMPIRICAL EVIDENCE FROM LISTED BANKS IN GHANA**

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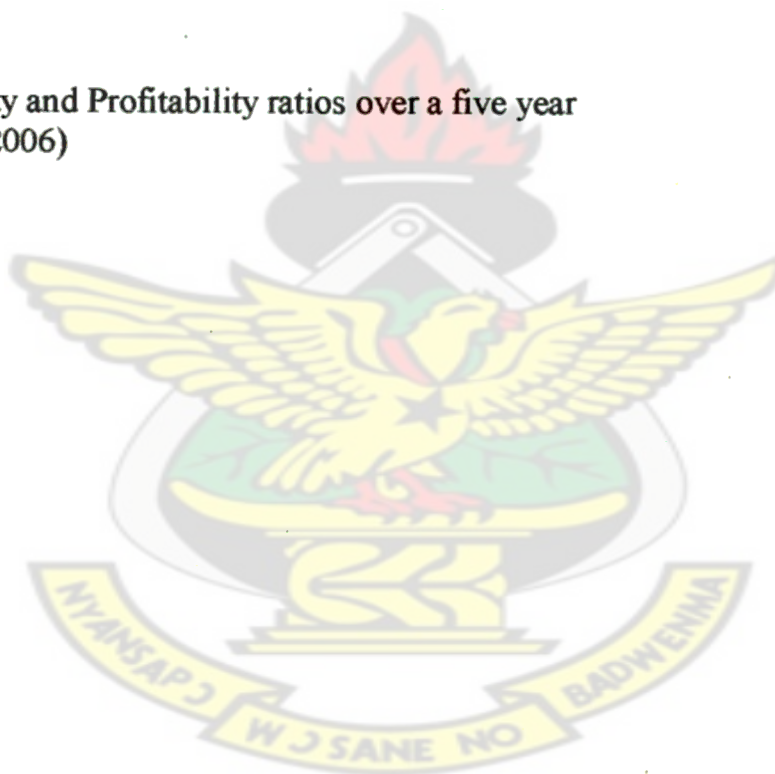
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(TO GOD BE THE GLORY)**

**TO GOD BE THE GLORY!**

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## **CHAPTER ONE**

### **RESEARCH INTRODUCTION**

#### **1.1 BACKGROUND OF THE STUDY**

For many centuries, banks have played a vital role in the financial system. This role continues in modern times, though the forms of banking change along with the needs of the economy. Fraser *et al* (2001) argue that banks provide financial intermediation and other financial services, which are required for economic growth, in anticipation of earning profits from these activities. The bank's principal goal therefore, like any other for profit business, is to maximize shareholders wealth.

Eljelly (2004) emphasized that the working capital approach to liquidity management has long been the prominent technique used to plan and control liquidity. The working capital includes all the items shown on a company's balance sheet as short-term or current assets, while net working capital excludes current liabilities. This measure is considered a useful tool in accessing the availability of funds to meet current operations of companies. However, instead of using working capital as a measure of liquidity, many analysts advocate the use of current and quick ratios, which have the advantage of making trend or cross sectional comparison possible which this study uses in addition to cash and net operating cash flow ratios.

However, the ultimate measure of the efficiency of liquidity planning and control is the effects it has on profits and shareholders' value. The researcher also considers net profit

margin, return on equity, return on assets and net asset turnover ratios to establish the banks profitability trend for comparison.

As a result, businesses with cash needs for expansion have their best prospects when they turn to the Stock Exchange. Through the Stock Exchange, such businesses can turn to the public at large and invite the public to lend them cash or take a share in the business and by implication, a share in future profits. In this way, companies can tap the savings of every person in the country in order to obtain the long-term capital that may not be available from their own resources or from their bankers.

The researcher considers only banks listed on the Stock Exchange for this study. These banks which were randomly selected involve Standard Chartered Bank Ghana Ltd.(SCB), Cal Bank Ltd.(CAL) and SG-SSB Ltd. Again, ratio analysis was used for:

1. Comparing performance, in terms of liquidity and profitability, of each bank from 2002 to 2006. This is called the time series analysis.
2. Comparing performance, in terms of liquidity and profitability, among the chosen banks from 2002 to 2006. This can also be classified as cross-sectional analysis.

Lastly, this study poses these research questions:

1. What are the banks level of liquidity and profitability over the period understudy?
2. What effect is the banks liquidity level having on its profitability?

3. Does it mean that this long-term cash-generating capability opportunity available to the listed companies on the Exchange indicates a positive relationship with their profitability?

## 1.2 STATEMENT OF THE PROBLEM

Watson and Head (2007) said long-term investment and financing decisions give rise to future cash flows which, when discounted by an appropriate cost of capital, determine the market value of a company. However, such long-term decisions will only result in the expected benefits for a company if attention is also paid to short-term decisions regarding current assets and liabilities. As stated by Van Horne and Wachowicz (2000) that excessive levels of current assets can easily result in a firm's realizing a substandard return on investment. Conversely, firms with too few current assets may incur shortages and difficulties in maintaining smooth operation.

Again, Raheman and Nasr (2007) stated that the ultimate objective of any firm is to maximize the profit. But, preserving liquidity of the firm is an important objective too. The problem is that increasing profits at the cost of liquidity can bring serious problems to the firm. Therefore, there must be a trade off between these two objectives of the firms. One objective should not be at cost of the other because both have their importance. If we do not care about profit, we can not survive for a longer period. On the other hand, if we do not care about liquidity, we may face the problem of insolvency or bankruptcy.



Because of this importance, shareholders and other stakeholders are invariably interested in the company's liquidity and profitability trends and the relationship thereof. This is to help them make the right decision as far as the amount and company to invest in are concern and to forecast and ascertain the prospects of such companies before committing themselves to business dealings. Hence, the researcher seeks to find out from the financial statements of Standard Chartered Bank Ghana Ltd., Cal Bank Ltd. and SG-SSB from 2002 to 2006 the relationship between liquidity and profitability using ratio analysis.

### **1.3 OBJECTIVES OF THE STUDY**

The researcher after careful study has outlined the following as its research objectives:

1. To determine the liquidity trend of the selected banks and compare among themselves from 2002 to 2006. (accomplished in chapter 4, pp42-53)
2. To ascertain the profitability trend of the selected banks and compare among themselves from 2002 to 2006. (accomplished in chapter 4, pp48-54)
3. To establish and analyze the relationship between the bank's liquidity and profitability levels from 2002 to 2006. (accomplished in chapter 4, pp55-59)
4. To make recommendations to Banks operating in Ghana, especially, to those listed on the Ghana Stock Exchange and for further studies. (accomplished in chapter 5, pp64-68)



#### **1.4 RELEVANCE OF THE STUDY**

This study seeks to bring focus to banks and other entities not to confuse liquidity with profitability, because they are two different things as explained above. However, the ultimate measure of the efficiency of liquidity planning and control is the effects it has on profits and shareholders' value (Eljelly, 2004).

Again, this research seeks to serve as a guide to investors as they will not ignorantly or haphazardly throw their money into the thin air, as in invest in banks without doing the necessary cost and benefit analysis, in terms of liquidity and profitability trends to guarantee a reasonable future returns and an absolute assurance in management..

Finally, since this research is going to serve as a beacon of hope for the general public, managers will have a duty to ensuring a reasonable investments in liquid assets to generate profits necessary enough to convincing potential investors in making decision about the company to invest in as far as its future prospects are concern. Thus, it will help management to understand the concept of liquidity and its impact on profitability and to continuously improve the level of each to meet the expectations of stakeholders.

#### **1.5 HYPOTHESIS TO BE TESTED**

This research covers new areas by providing empirical evidence that has to do with the relationship between liquidity and profitability of banks listed on the Ghana Stock

Exchange. In helping to establish a clear view of such relationship, this research poses two hypothetical problems.

**The null hypothesis:** liquidity and profitability of banks are positively related.

**The alternate hypothesis:** there is no relationship between liquidity and profitability of banks.

## 1.6 SCOPE OF THE STUDY

This research is a case study type, hence restricted to banks listed on the Ghana Stock Exchange (GSE) which include Standard Chartered Bank Ghana Ltd., Cal Bank Ltd. and SG-SSB. The researcher considered the GSE market for this research because of easy access to financial statements of companies. Banks were also chosen because of their current performance, expansion and strategic position in the country.

Financial statements for 2002 to 2006 accounting years were considered for assessment as far as this research is concern because the researcher's effort could only lay hands on such information. The liquidity and profitability levels of the banks were used for the study. Hence, liquidity ratios used for the analysis include current ratio, quick ratio, cash ratio and net operating cash flow ratio. Whereas, profitability ratios used include net profit margin, Return on Equity (ROE), Return on Asset (ROA) and net asset turnover ratios.

## **1.7 LIMITATIONS OF THE STUDY**

Every academic research conducted has got its own constraints and limitations associated with it. This research is not different as its limitations springs from financial down to technical. And these include:

- i. Inadequate information for the literature posed a challenge to the research.
- ii. Inadequate funds.

The activities that were done in coming out with the research were programmed to meet the expected funds and time available for the research. Also, the sampling technique used for the collection of primary data was cost effective which did not compromise on quality of data collected and therefore ensured a true representation of the primary data collected. Steps were initiated to collect quality and reliable secondary data to enrich the research.

In nutshell, the researcher exhausted all available opportunities, tapped available strengths, reduced all weaknesses to an acceptable level and circumvented all threats to reach a successful and enriched research to posterity.

## **1.8 ORGANIZATION OF THE STUDY**

We conclude that the work covers five (5) chapters.

Chapter one presents the general introduction of the study which emphasizes the core reasons and purpose of this research.

Chapter two brings out the literature relating to this research and gives the overview of this study.

Chapter three focuses on the procedures and methods employed for the collection and analysis of data and the profile of the banks under study.

Chapter four presents the findings and analysis of the data collected for the research.

Chapter five gives the summary of findings, recommendations and conclusions of the study in relation to the objective set out in chapter one.

## **1.9 CHAPTER SUMMARY**

This chapter was fashioned to present a general overview of the impact of liquidity on profitability of Standard Chartered Bank Ghana Ltd., Cal Bank Ltd. and SG-SSB from 2002 to 2006 accounting years. The researcher wants to find out, if indeed, the liquidity position of the banks has a bearing on its profitability level.

There is also a highlight on the scope of the study and the limiting factors in the cause of conducting this research which however did not compromise quality and reliability of information gathered.

The chapter has set the foot for the present study. The remaining chapters will follow accordingly as demonstrated in the organization of the study in page 7.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

The previous chapter delves extensively into the background of the study, brought out the identified problem necessitating the research, objectives set for the study and the importance of the study. It also covers the hypothesis to be tested, the scope of the study, limitations encountered in the course of the research and the organization of the study.

However, this chapter is intended to review the impact of liquidity on profitability in the banking sector as far as banks listed on the Ghana Stock Exchange are concern from 2002 to 2006. It also highlights on the activities of the banks resulting to liquidity generation which may lead to profit. Lastly, it identifies the key financial ratios usually used to assessing the general performance of banks and financial appraisal studies.

#### **2.2 BANKING IN GHANA**

According to the Banking Act, 2004 Act 673 of Ghana, a bank is defined as a body corporate, incorporated in Ghana, licensed to carry out the business of banking in Ghana.

Section 11(1) of the act describes the business of banking as follows:-

- Acceptance of deposits and other repayable funds from the public.
- Lending
- Financial leasing.



- Investment in financial securities.
- Money transmission services.
- Issuing and administering means of payment including credit cards travellers' cheques and bankers' drafts.
- Guarantees and commitments.
- Trading for own account or for account of customers in

I. Money markets instruments

II. Foreign exchange

III. Transferable securities.

- Participation in securities issues and provision of services related to those issues.
- Advice to undertakings on capital structure, acquisition and merger of undertaking.
- Portfolio management and advice.
- The keeping and administration of securities.
- Credit reference services.
- Safe custody of valuables.
- Electronic Banking

Given that Banks are private or public corporations that engage in the provision of services in anticipation of earning a return from these services, then like any other profit oriented business, a bank's goal will be to maximize shareholder wealth or maximize the return to the owners of the business. This question then arises, how these returns can be measured, or on what basis can it be decided that the current returns to the owners of the financial institution are adequate?

In the case of a company listed on the stock exchange the owners or shareholders are clearly in a better position when the price of the stock rises. According to Fraser *et al* (2001), “shareholder wealth is measured by the market value of a bank’s stock and the amount of cash dividends paid”. There are however numerous banks that are not listed on the stock exchange and for which therefore stock prices cannot be used as an indicator of risk and return. For example, according to the Ghana Stock Exchange Factbook, 2005, as at September 30, 2005 only seven Banks out of a total of twenty one banks licensed to operate in this country were listed on the stock exchange. For the unlisted banks there is no record of stock values that can be relied on as an indicator of a company’s financial success or otherwise. In this situation most financial analysts use various assessment models to appraise the financial performance of companies (including banks).

### **2.3 THE NATURE OF RATIOS**

As regards the appraisal of financial performance, Pandey (2003) maintains that the appraisal of the financial performance of a firm can be done through the analysis of its financial statements which give an insight about its financial strengths and weaknesses. Ratio analysis, according to him, is a powerful tool for financial analysis, where a ratio can be used as a benchmark for evaluating the financial position and performance of a firm. He defines a ratio as “the indicated quotient of two mathematical expressions” and as “the relationships between two or more things”.

Similarly, Bateman and Snell (1999) stated that using key financial ratios is an effective approach for checking on the overall performance of an enterprise. They continue to explain that ratios help indicate possible strengths and weaknesses in a company's operations.

Larson *et al* (1999) also pointed out that ratios are among the most popular and widely used tools of financial analysis. They emphasized that they provide us with clues and symptoms of underlying conditions and trends difficult to detect by inspecting individual components making up the ratio. Ratios, properly interpreted, identify areas requiring further investigation and like other analysis tools, are usually future oriented, they added. According to them, a ratio expresses a mathematical relation between two quantities and can be expressed as a percent, rate, or proportion.

Salmi *et al* (1990) researched on the financial ratios of 32 publicly traded Finnish companies for 1974-1984 and were able to classify financial ratios into the following three groups:

1. **Accrual ratios:** which include ratios covering liquidity, capital adequacy, profitability and efficiency.
2. **Cash flow ratios:** which include cash net income to cash from sales, cash operating income to total assets, cash flow to capital investments divided by cash based sales, cash outflow to materials supplies and staff costs divided by cash from sales, and cash outflow to interest payments divided by cash operating income.

**3. Market based ratios:** which contain market information and are therefore distinct from the conventional financial ratios by definition.

According to the Federal Reserve Centre for Online Learning (2004) the basic ratios used to identify performance issues in banks are as follows;

- 1. Earnings Performance Ratios:** including Net interest income to average assets, Provision for loan losses to average assets, Net realised gains or losses to average assets and Net income to average assets.
- 2. Asset Quality Ratios:** involving Noncurrent advances to total advances and Allowance for loan losses to noncurrent loans.
- 3. Capital Adequacy Ratios:** comprising Cash dividends to Net Income and Tier 1 capital to average assets.

The U.S. Business Reporter (2006) gives the following ratios as the most pertinent information to analyze financial institutions' financial statements:

- 1. Return on Assets (ROA):**  $\text{Return on Average Assets} = \frac{\text{Net operating income}}{\text{Total assets}}$ .
- 2. Return on Equity (ROE):**  $\text{Return on Equity} = \frac{\text{Net income} - \text{preferred dividends}}{\text{stockholder equity}}$ .
- 3. Rate Paid on Funds:**  $\text{Rate paid on funds} = \frac{\text{Total interest expense}}{\text{Total earning assets}}$ .
- 4. Net Interest Margin:**  $\text{Net interest margin} = \frac{\text{Net interest income}}{\text{Earning assets}}$ .



**5. Provision for Loan Losses:** The report analyzes this ratio into the entire reserve as a percentage of advances (reserve/total loans), or particular charge offs as a percentage of advances (charge offs/total advances).

**6. Long Term Debt to Total Liabilities and Equity:** which is an indication of banks ability to borrow funds. Long term debt to total liabilities and equity = Long term debt/total liabilities + equity.

**7. Loans to Assets:** which is a measure of a bank's credit exposure and therefore its liquidity, and its risk to default. Loans to Assets = Advances /Total assets.

**8. Equity to Assets:** which is an indicator of the capital adequacy of a bank. Equity to Assets = Stockholders equity/Average total assets.

**9. Equity to Loans:** which reflects the degree of equity coverage to outstanding advances. Equity to loans = average common equity/Average total assets.

Fraser *et al* (2001) put forward the view that the key ratios commonly used to evaluate different dimensions of financial performance are as follows:

- i) Profit Ratios, of which the most important are Return on Equity (ROE), Return on Assets (ROA) and Net Interest Margin.
- ii) Asset Quality Ratios, which include Provision for Loss Ratio, Loan Ratio and Net Charge Offs.
- iii) Operating Efficiency Ratios, this can be calculated to provide information on cost control by dividing various expense accounts by total operating expenses for different expense categories.



- iv) Liquidity Ratios, which include Temporary Investments Ratio and Volatile Liability Dependency.

Again, according to Brigham and Ehrhardt (2008), the relationship between two accounting figures, expressed mathematically, is known as a financial ratio (or simply as a ratio). Ratios help to summarize large quantities of financial data and to make qualitative judgement about the firm's financial performance. For example, current ratio is calculated by dividing current assets by current liabilities; the ratio indicates a relationship—a quantified relationship between current assets and current liabilities. This relationship is an index or yardstick which permits a qualitative judgement to be formed about the firm's ability to meet its current obligations. It measures the firm's liquidity. The greater the ratio, the greater the firm's liquidity and vice versa. The point to note is that a ratio reflecting a quantitative relationship helps to form a qualitative judgement. Such is the nature of all financial ratios.

### 2.3.1 Standards of Comparison

Atrill (2006) stated that ratio analysis involves comparison for a useful interpretation of the financial statements. A single ratio in itself does not indicate favourable or unfavourable condition. It should be compared with some standard. Standards of comparison may consist of:

- **past ratios**, i.e. ratios calculated from the past financial statements of the same firm;
- **competitors' ratios**, i.e. ratios of some selected firms, especially the most progressive and successful competitor, at the same point in time;
- **industry ratios**, i.e. ratios of the industry to which the firm belongs; and

- **projected ratios**, i.e. ratios developed using the projected, or pro forma, financial statements of the same firm.

### **2.3.2 Review of previous financial appraisal studies.**

An appraisal of the financial statements of seventeen Malaysian banks through ratio analysis by Rosly and Abu (2003) found that Islamic Banking Scheme (IBS) banks were able to record higher return on assets (ROA) since they were able to utilize existing overheads carried by mainstream banks. As this lowered their overhead expenses, it was found that the higher ROA ratio for IBS banks did not necessarily imply efficiency. It was also inconsistent with their relatively low asset utilization and investment margin ratios.

Siddiqui and Podder (2002) examined the financial statements of fourteen Bangladeshi banks in a bid to evaluate the effectiveness of financial audit of banks operating in Bangladesh. The study identified seven banks which had under-provided for classified loans thereby overstating their profits. The auditors failed to state explicitly that the seven “defaulting” banks had departed from their regulatory requirements. The study therefore questioned the level of independence, objectivity and competence of the auditors assigned for auditing banks.

Kaminsky *et al* (2004) carried out an exploratory study to determine if financial ratios of fraudulent firms differ from those of non fraudulent companies. Seventy nine fraudulent

companies were identified by examining SEC Accounting and Auditing enforcement releases issued between 1982 and 1999. These fraudulent firms were matched with non fraudulent firms on the basis of size, time period and industry. Using this matched-pairs design, ratio analysis over a seven year period (fraud year  $\pm$  3 years) was conducted on twenty one ratios. Overall, sixteen ratios were found to be significant. Of these, only three ratios were found to be significant for three time periods (i.e. Fixed Assets\Total Assets, Total Liabilities\Total Assets and Working capital\Total Assets). The study proved the limited ability of financial ratios to detect and\or predicts the occurrence of fraud.

Al-Shammari and Salimi (1998) employed the data envelopment analysis (DEA) model to evaluate the comparative efficiency of banks in Jordan. Six ratios were chosen subject to the constraint of the model that a high value of the ratio is better than a low value. These were Return on Investment (ROI), Return on Equity (ROE), Earnings per Share, Advances to Total Assets, Advances to Deposits and Cash and Portfolio Investments to Deposits. The model was applied to the financials of sixteen commercial banks operating in Jordan over the four year period 1991 to 1994. The study concluded that the majority of the banks (78%) were inefficient

Eljelly (2004) examined the relation between profitability and liquidity, as measured by current ratio and cash gap (cash conversion cycle) on a sample of joint stock companies in Saudi Arabia using correlation and regression analysis. The study found that the cash conversion cycle was of more importance as a measure of liquidity than the current ratio



that affects profitability. The results were stable and had important implications for liquidity management in various Saudi companies.

First, it was clear that there was a negative relationship between profitability and liquidity indicators such as current ratio and cash gap in the Saudi sample examined. Second, the study also revealed that there was great variation among industries with respect to the significant measure of liquidity.

Deloof (2003) discussed that most firms had a large amount of cash invested in working capital. It can therefore be expected that the way in which working capital is managed will have a significant impact on profitability of those firms. Using correlation and regression tests he found a significant negative relationship between gross operating income and the number of days accounts receivable, inventories and accounts payable of Belgian firms. On basis of these results he suggested that managers could create value for their shareholders by reducing the number of days' accounts receivable and inventories to a reasonable minimum. The negative relationship between accounts payable and profitability is consistent with the view that less profitable firms wait longer to pay their bills.

Shin and Soenen (1998) highlighted that efficient Working Capital Management (WCM) was very important for creating value for the shareholders. The way working capital was managed had a significant impact on both profitability and liquidity. The relationship between the length of Net Trading Cycle, corporate profitability and risk adjusted stock

return was examined using correlation and regression analysis, by industry and capital intensity. They found a strong negative relationship between lengths of the firm's net trading Cycle and its profitability. In addition, shorter net trade cycles were associated with higher risk adjusted stock returns.

Smith and Begemann (1997) emphasized that those who promoted working capital theory shared that profitability and liquidity comprised the salient goals of working capital management. The problem arose because the maximization of the firm's returns could seriously threaten its liquidity, and the pursuit of liquidity had a tendency to dilute returns. This article evaluated the association between traditional and alternative working capital measures and return on investment (ROI), specifically in industrial firms listed on the Johannesburg Stock Exchange (JSE). The statistical test results showed that a traditional working capital leverage ratio, current liabilities divided by funds flow, displayed the greatest associations with return on investment. Well-known liquidity concepts such as the current and quick ratios registered insignificant associations whilst only one of the newer working capital concepts, the comprehensive liquidity index, indicated significant associations with return on investment

The recent work of Howorth and Westhead (2003), suggest that small companies tend to focus on some areas of working capital management where they can expect to improve marginal returns. For small and growing businesses, an efficient working capital management is a vital component of success and survival; i.e both profitability and liquidity (Peel and Wilson, 1996). They further assert that smaller firms should adopt



formal working capital management routines in order to reduce the probability of business closure, as well as to enhance business performance.

The study of Grablowsky (1976) and others have showed a significant relationship between various success measures and the employment of formal working capital policies and procedures. Managing cash flow and cash conversion cycle is a critical component of overall financial management for all firms, especially those who are capital constrained and more reliant on short-term sources of finance (Deakins *et al*, 2001).

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#### **2.4 THE CONCEPT OF LIQUIDITY AND PROFITABILITY**

According to Chamberlain (2008), in banking, liquidity is the ability to meet obligations when they come due without incurring unacceptable losses. Managing liquidity is a daily process requiring bankers to monitor and project cash flows to ensure adequate liquidity is maintained.

He further explained that maintaining a balance between short-term assets and short-term liabilities is critical. Deposit accounts represent the primary funding (liabilities) in traditional commercial banks, and the loan portfolio represents the primary asset. The investment portfolio represents a smaller portion of assets, and serves as the primary source of liquidity. Investment securities can be liquidated to satisfy deposit withdrawals and increased loan demand.

In the same way, Larson *et al* (1999) referred liquidity to the availability of resources to meet short-term cash requirements. A company's short-term liquidity is affected by the timing of cash inflows and outflows along with its prospects for future performance. Our analysis of liquidity is aimed at a company's capital requirements, they stated.

They differentiated liquidity from profitability by referring profitability to the ability of a company to use its assets efficiently to produce profits and positive cash flows. Hence, profitability refers to a company's ability to generate an adequate return on invested capital. They added that inefficient use of assets can yield liquidity problems.

According to Wood and Sangster (2008), profitability measures indicate whether the company is performing satisfactorily. They emphasized that they are used, among other things, to measure the performance of management, to identify whether a company may be a worthwhile investment opportunity, and to determine a company's performance relative to its competitors.

As elucidated by Eljelly (2004) that efficient liquidity management involves planning and controlling current assets and current liabilities in such a manner that eliminates the risk of the inability to meet due short-term obligations, on one hand, and avoids excessive investment in these assets, on the other. This is due in part to the reduction of the probability of running out of cash in the presence of liquid assets. And because of the direct effect of liquidity not only on cash position and the troubles it may cause to financial managers, but on company's profits in a more direct way, he added. This direct

effect stems from the need of the company to borrow to finance the working capital requirements and cash gaps. The borrowing cost reduces both pretax and after-tax profits by equal amounts. Likewise, reducing cash gaps by any number of days will add equally to the pretax and after-tax profits.

Banks have several additional options for generating liquidity, such as selling loans, borrowing from other banks, borrowing from a Central bank, credit insurance, factoring of receivables and raising additional capital. In a worst case scenario, depositors may demand their funds when the bank is unable to generate adequate cash without incurring substantial financial losses. In severe cases, this may result in a bank run. Most banks are subject to legally-mandated reserve requirements intended to help banks avoid a liquidity crisis.

Banks can generally maintain as much liquidity as desired because bank deposits are insured by governments in most developed countries. A lack of liquidity can be remedied by raising deposit rates and effectively marketing deposit products. However, an important measure of a bank's value and success is the cost of liquidity. A bank can attract significant liquid funds, but at what cost? Lower costs generate stronger profits, more stability, and more confidence among depositors, investors, and regulators.

In nutshell, he indicated that liquidity management is important in good times and it takes further importance in troubled times. The efficient management of the broader measure



of liquidity, working capital, and its narrower measure, cash, are both important for a company's profitability and well being.

Again, Incoom (1998) explained that money is more appropriately described as a liquid store of value. By 'liquid store of value' we mean that a financial asset can be converted into a readily spendable means of payment whenever the holder wants. Liquidity, thus, emphasizes the ability to transform wealth holding into cash without loss of value or delay. For instance, if you are extending credit to a customer or making a short-term bank loan, you are interested in more than the company's leverage. You want to know whether it will be able to lay its hands on the cash to repay you. That is why credit analysts and bankers look at several measures of liquidity. Hence, liquid assets can be converted into cash quickly and cheaply (Brealey *et al*, 2001).

Edmonds *et al* (2003) explained that the amount of cash on hand must be closely monitored to ensure the viability and profitability of the business. There must be enough cash available to pay employees, suppliers, and creditors as amounts become due. When a company fails to pay legal debts, the creditors can force the business into bankruptcy. While the availability of cash is critical, management should avoid the accumulation of excess idle cash. The failure to invest excess cash in earnings assets adversely affects profitability. Cash inflows and outflows must be properly managed to prevent a shortage or surplus of cash, they asserted.

## 2.6 THE USES AND LIMITATIONS OF RATIO ANALYSIS

According to Brigham and Ehrhardt (2008), ratio analysis is used by at least three main groups:

- (a) managers, who employ ratios to help analyze, control, and thus improve their firms' operations;
- (b) credit analysts, such as bank loan officers or bond rating analysts, who analyze ratios to help ascertain a company's ability to pay its debts; and
- (c) stock analysts, who are interested in a company's efficiency, risk, and growth prospects.

However, Larson *et al* (1999) generally classified users of the financial statement analysis into internal managers, officers, internal auditors, consultants, and many other important internal decision makers and external comprising shareholders, lenders, directors, customers, suppliers, regulators, lawyers, brokers and the press. They continue to state that the purpose of the internal and external users of accounting information is to provide information helpful in improving the company's efficiency and effectiveness in providing products and services and make better and more informed decisions in pursuing their own goals respectively.

For instance, shareholders and creditors assess future company prospects for investing and lending decisions. A board of directors analyzes financial statements in monitoring management's decisions. Employees and unions use financial statements in labor negotiations. Suppliers use financial statements in deciding whether to establish supply



relationships. Public utilities set customer rates by analyzing financial statements. Auditors use financial statements assessing the "fair presentation" of their clients' financial statements in making buy-sell recommendations and setting credit ratings.

While ratio analysis can provide useful information concerning a company's operations and financial condition, according to Brigham and Ehrhardt (2008), the following problems can be associated with ratio analysis:

First, many large firms operate different divisions in different industries, and for such companies it is difficult to develop a meaningful set of industry averages for comparative purposes. Therefore, ratio analysis is more useful for small, narrowly focused firms than for large, multidivisional ones.

Second, most firms want to be better than average, so merely attaining average performance is not necessarily good. As a target for high-level performance, it is best to focus on the industry leaders' ratios. Benchmarking helps in this regard.

Third, inflation may distort firms' balance sheets, causing reported values to be substantially different from "true" values. Further, since inflation affects both depreciation charges and inventory costs, profits are also affected. Thus, a ratio analysis for one firm over time, or a comparative analysis of firms of different ages, must be interpreted with judgment.

Fourth, seasonal factors can also distort a ratio analysis. For example, the inventory turnover ratio for a food processor will be radically different if the balance sheet figure used for inventory is the one just before or just after the close of the canning season. This problem can be minimized by using monthly averages for inventory (and receivables) when calculating turnover ratios.

Fifth, firms sometimes employ "window dressing" techniques to make their financial statements look stronger. To illustrate, a Chicago builder borrowed on a two-year basis on December 29, 1998, held the proceeds of the loan as cash for a few days, and then paid off the loan ahead of time on January 2, 1999. This improved his current and quick ratios, and made his year-end 1998 balance sheet look good. However, the improvement was strictly window dressing, because a few days later the balance sheet was back at the old level.

Sixth, different accounting practices can distort comparisons. As noted earlier, inventory valuation and depreciation methods can affect financial statements and thus distort comparisons among firms. Also, if one firm leases a substantial amount of its productive equipment, then its assets may appear low relative to sales because leased assets often do not appear on the balance sheet. At the same time, the liability associated with the lease obligation may not be shown as a debt. Therefore, leasing can artificially improve both the turnover and the debt ratios. However, the accounting profession has taken steps to reduce this problem.

Seventh, it is difficult to generalize about whether a particular ratio is "good" or "bad." For example, a high current ratio may indicate a strong liquidity position, which is good, or excessive cash, which is bad (because excess cash in the bank is a non-earning asset). Similarly, a high fixed assets turnover ratio may denote either a firm that uses its assets efficiently or one that is undercapitalized and cannot afford to buy enough assets.

Eighth, a firm may have some ratios that look "good" and others that look "bad," making it difficult to tell whether the company is, on balance, strong or weak. However, statistical procedures can be used to analyze the net effects of a set of ratios. Many banks and other lending organizations use discriminant analysis, a statistical technique, to analyze potential borrowers' financial ratios, and on the basis of this analysis, classify companies according to their probability of getting into financial trouble.

Ratio analysis is useful, but analysts should be aware of these problems and make adjustments as necessary. Ratio analysis conducted in a mechanical, unthinking manner is dangerous, but used intelligently and with good judgment, it can provide useful insights into a firm's operations.

## **2.7 LOOKING BEYOND THE NUMBERS**

Brigham and Ehrhardt (2008) further stated that while it is important to understand and interpret financial statements, sound financial analysis involves more than just calculating

and interpreting numbers. Good analysts recognize that certain qualitative factors must also be considered. These factors, as summarized by the American Association of Individual Investors (AAII), are as follows:

1. Are the company's revenues tied to one key customer? If so, the company's performance may dramatically decline if the customer goes elsewhere. On the other hand, if the relationship is firmly entrenched, this might actually stabilize sales.
2. To what extent are the company's revenues tied to one key product? Companies that rely on a single product may be more efficient and more focused, but a lack of diversification increases risk. If revenues come from several different products, the overall bottom line will be less affected by a drop in the demand for any one product.
3. To what extent does the company rely on a single supplier? Depending on a single supplier may lead to unanticipated shortages, which is something that investors and potential creditors need to assess.
4. What percentage of the company's business is generated overseas? Companies with a large percentage of overseas business are often able to realize higher growth and larger profit margins. However, firms with overseas operations find that earnings from these operations are strongly affected by changes in the value of the local currency. Thus, fluctuations in currency markets create additional risks for firms with large overseas operations.



5. **Competition:** Generally, increased competition lowers prices and profit margins. In forecasting future performance, it is important to assess both the likely actions of the current competition and the likelihood of new competitors in the future
6. **Future prospects:** Does the company invest heavily in research and development? If so, its future prospects may depend critically on the success of new products in the pipeline. For example, the market's assessment of a computer company depends on what next year's products look like. Likewise, investors in pharmaceutical companies are interested in knowing whether the company has developed any "breakthrough" drugs that may be marketable in the years ahead.
7. **Legal and regulatory environment:** Changes in laws and regulations have important implications for many industries. For example, when forecasting the future of tobacco companies, it is crucial that an analyst factor in the effects of proposed regulations and pending or likely lawsuits. Likewise, when assessing banks, telecommunications firms, and electric utilities, analysts need to forecast both the way in which these industries will be regulated in the years ahead and the ability of individual firms to respond to changes in regulation.



## **2.2 CONCEPTUAL FRAMEWORK**

Various liquidity and profitability ratios have been reviewed from the myriad known for appraising the financial performance of a company. However, for the purposes of this study, we shall rely on the Current ratio, Quick ratio, Cash ratio and Net operating cash flow ratio (which is given as net operating cash flow divided by current liabilities, by the researcher) under liquidity ratios and profitability ratios will comprise Net Profit Margin, Return on Equity, Return on Assets and Net Asset Turnover ratios. Also, limitations and other factors to be considered when interpreting financial ratios have been highlighted.

Again, emphasize was placed on the activities of banks in Ghana and how they work to magnify the returns of shareholders and other stakeholders. Thereby providing a highlight of how shareholder wealth can be measured by the market value of a bank's stock and dividend payments vis-à-vis listed and unlisted banks

In this regard, it is therefore deemed necessary to appraise the financial performance of banks listed on the Ghana Stock Exchange such as Standard Chartered Bank Gh. Ltd., Cal Bank Limited and SG-SSB in terms of the effect liquidity management will have on profitability.

## **CHAPTER THREE**

### **METHODOLOGY AND ORGANIZATIONAL PROFILE**

#### **3.1 INTRODUCTION**

The previous chapter probed into the literature of banking in Ghana, the nature of ratios, the concept of liquidity and profitability, the uses and limitations of ratio analysis, looking beyond the numbers and the conceptual framework.

Nonetheless, this chapter discusses the research question and profile of Standard Chartered Bank Ghana Ltd., Cal Bank Limited and SG-SSB.

This chapter has been structured chronologically and discussed in the following order:

3.2 The data collection and sample techniques

3.3 The method of data analysis

3.4 The limitations of the methodology

3.5 The definition of key variables

3.6 The profile of the selected banks

3.7 The chapter summary

This chapter follows accordingly with the above outline.

### 3.2 THE DATA COLLECTION AND SAMPLE TECHNIQUES

This research covers a five-year period from 2002 to 2006 and based on the objectives set out in chapter one (page 4), the researcher did not issue out questionnaire, rather, interview with key persons in SCB, CAL and SG-SSB was conducted. The reason for restricting to this period is that the latest data for investigation was available for this period.

In addition, secondary data were collected from published financial statements of the banks from the Ghana Stock Exchange from 2002 to 2006 which included the consolidated profit and loss account and balance sheet and cash flow statement.

Indeed, the consolidated profit and loss account and the balance sheet help to achieve both the first and second objectives of this research and serve as a basis of achieving the third objective of establishing and analyzing the relationship between profitability and liquidity levels over the years.

Further, data used in this study was also gathered from textbooks, Ghana Stock Exchange brochures, journals, internet and websites.

The researcher also considered a population of 8 banks listed on the stock exchange. This is because the stock exchange serves as a place where small and large businesses with cash needs for expansion have their best prospects. Through the stock exchange, such businesses can turn to the public at large and invite the public to lend them cash or take a

share in the business and by implication, a share in future profits. Therefore, does it mean that this long-term cash-generating capability opportunity available to the listed companies indicates a positive relationship with their liquidity?

Lastly, the simple random sample was chosen to give every unit or bank in the population the same or an equal chance of selection or exclusion.

### **3.3 THE METHOD OF DATA ANALYSIS**

Ratio analysis was adopted to gather the necessary information to be able to evaluate the financial position and performance of the bank in terms of its liquidity and profitability. This is because ratios help to summarize large quantities of financial data and to make qualitative judgement about a firm's financial performance. Thus, ratios reflecting a quantitative relationship help to form a qualitative judgement.

Therefore, profitability ratios used included Net profit margin on sales (PMS), Return on Asset (ROA), Return on Equity (ROE) and Net asset turnover ratio. Whereas, liquidity ratios comprise Current ratio, Quick ratio, Cash ratio and Net operating cash flow ratio which is expressed as net cash inflow from operating activities divided by current liabilities to measure the extent to which total cash inflow from operating activities will be able to cover the bank's current liabilities (by the researcher). The choice of variables is influenced by the previous studies on financial appraisal and ratio for assessing performance.



In financial analysis the direction of changes over a period of years is of crucial importance. Time series or trend analysis of ratios indicates the direction of change and reflects whether the firm's financial performance has improved, deteriorated or remained constant over time. Therefore, the researcher employs trend analysis to achieve the objectives set out in this study.

Again, the researcher used cross-sectional analysis in few occasions to ascertain the best performer at any point in time. This also aims at achieving the first and second objectives stated in chapter one.

### **3.4 THE LIMITATIONS OF THE METHODOLOGY**

Wrong inferences may be drawn about banks in Ghana since the researcher only segmented banks listed on the Ghana Stock Exchange for the simple random sampling.

The simple random sampling involves shuffling of papers which may not have being carried out properly resulting to inaccurate inferences. However, to mitigate this, the researcher used numbers in the selection.

### **3.5 THE DEFINITION OF KEY VARIABLES**

- i. **Stock Exchange** – is an organized market in securities (shares, stocks and bonds)

- ii. **Financial statements** – contain summarized information of the firm's financial situation to the users.
- iii. **Ratio** – is the indicated quotient of two mathematical expressions. Hence, this study considers only liquidity and profitability ratios.

The liquidity ratios that the researcher employs in this study comprise;

**a) Current Ratio**

Rapid decreases in the current ratio sometimes signify trouble. For example, a firm that drags out its payables by delaying payment of its bills will suffer an increase in current liabilities and a decrease in the current ratio. Mathematically, this ratio is represented as:

$$\frac{\text{Current assets}}{\text{Current liabilities}}$$

**b) Quick (Acid-Test) Ratio**

Some assets are closer to cash than others. If trouble comes, inventory may not sell at anything above fire-sale prices. Thus managers often exclude inventories and other less liquid components of current assets when comparing current assets to current liabilities. They focus instead on cash, marketable securities, and bills that customers have not yet paid. This results in the quick ratio:

$$\frac{\text{Cash} + \text{marketable securities} + \text{receivables}}{\text{Current liabilities}}$$

**c) Cash Ratio**

A company's most liquid assets are its holdings of cash and marketable securities. That is why analysts also look at the cash ratio:

$$\frac{\text{Cash + marketable securities}}{\text{Current liabilities}}$$

A low cash ratio may not matter if the firm can borrow on short notice.

#### **d) Net Operating Cash Flow Ratio**

This ratio type was introduced by the researcher to ascertain if the net cash inflow from operating activities could settle the current liabilities or not over the years under study.

The formula is given as:

$$\frac{\text{Net Cash Inflow from operating activities}}{\text{Current Liabilities}}$$

On the other hand, the profitability ratios used consist;

#### **a) Net Profit Margin**

The profit margin relates a company's profits to the level of sales and thus indicates how much profit a company made for each cedi of sales. Since resources are required to produce and generate sales, a company that makes a higher level of profit for each cedi of sales is more profitable.

$$\text{Net profit margin} = \frac{\text{Net Profit}}{\text{Sales}}$$

#### **b) Return on Equity**

While the return on assets relates profitability to all the resources that have been put in place by the company, analysts are also interested in the extent to which the capital contributed by shareholders of the firm has been profitable.

$$\text{ROE} = \frac{\text{Net Income}}{\text{Equity}}$$

### **c) Return on Asset**

The profit margin gives an indication of how profitable each cedi of sales is but does not directly consider the resources or assets that were used to generate the profits. Other things being equal, it is preferable to generate profits with a lower level of assets because of the capital that is needed to build up assets such as plant, equipment and stocks. The overall profitability relative to all the assets utilized by the company is called the return on assets. A low return on assets may mean that a company has an overinvestment in assets, as would be the case if capacity utilization levels are low.

$$\text{ROA} = \frac{\text{Net Income}}{\text{Assets}}$$

### **d) Total Assets Turnover**

The total asset turnover is a measure of the amount of assets needed to generate a cedi of sales. Since investment in assets requires significant resource commitments, it is obvious that other things being equal, it is better to generate a given level of sales with a lower asset investment. A low asset turnover may indicate an overinvestment in assets.

$$\text{Total Asset Turnover} = \frac{\text{Sales}}{\text{Total Assets}}$$

## **3.6 THE PROFILE OF THE SELECTED BANKS**

### **3.6.1 STANDARD CHARTERED BANK GH. LTD.**

Standard Chartered Bank Ghana Ltd's history dates back to 1896 when it began operations under the name Bank of British West Africa. In 1970, the bank was incorporated under the Companies Code of Ghana (Act 179) and it became a public company in 1971.



Headquarters of Standard Chartered Bank Ghana Ltd is located in High Street, Accra. The bank was provisionally listed on Ghana Stock Exchange on November 12, 1990. This set the pace for the company to work harder to gain formal listing, which indeed was received on August 23, 1991 and on February 16, 2006 had its listing of preference shares.

The bank also lend to various sectors in the economy such as agriculture, transport, cottage industry/manufacturing and other commercial activities. It also has 100million authorized number of shares, 17.6million issued number of shares, 17.5million issued number of preference shares and stated capital of 131,313million.

As a limited company, the bank has Ishmael Yamson (Chairman), Ebenezer Essoka (CEO), Ousman Lamin, Albert Saltson, Henry Dei, Sanjoy Rughani, Samuel Daisie, Simon Millet and Alexander Mould as Directors, and Dawn K. Zaney as company secretary.

Again, Standard Chartered Holdings (Africa) B.V.P.O. Holland owns 66.5% of Standard Chartered Bank Ghana Ltd. Ordinary shares. Standard Chartered Holdings (Africa) B.V. owns 87.6% Standard Chartered Bank Ghana Ltd. Preference shares.

### **3.6.2 CAL BANK LIMITED**

Cal bank limited formerly Continental Acceptance Limited and Cal Merchant Bank was incorporated in March 1989 under the Companies Code, 1963 Act 179, as a private company limited by shares. The Bank was licensed in June 1990 and commenced business in July 1990. The nature of business engaged in is banking and other banking-related activities.

Cal Bank was listed on the Exchange in November 5, 2004. The location of its registered office is at 23 Independence Avenue, Accra. Security code is Cal and its auditors are KMPG chartered accountants, 25 Liberia Road, Accra – Ghana.

The bank's directors include George Victor Okoh – Chairman, Fank Brako Adu Jnr. – Managing Director, Leonora Kyeremanten, Malcolm Dermott Pryor, Paarock Vanpercy, R. Ahomka-Lindsay and Asuma Abu Banda. Top management also comprises Frank Brako Adu Jnr – Managing Director, Alexander Williams – Secretary, Patrick Anumel, Joseph Ofori-Teiko, Philip Owiredu, Kwesi Sarkodie-Mensah, Kwesi Tumi and Robert Kow Bentil.

The Bank had authorized no. of shares of 1,000,000,000, issued no. of shares of 158,626,936 and a stated capital of 71,429,000,000. Agyemang & Associates, 3<sup>rd</sup> floor America House, Tudu – Accra, and Reindorf Chambers, 61 Jones Nelson Road, Accra, were the company's solicitors.

### 3.6.3 SG-SSB

SG-SSB formerly SSB was incorporated in February 7, 1975 as a private limited liability company. It was licensed to operate as a bank in 1976. SSB commenced business in January 1977. SSB became a public limited liability company in July 20, 1991. SG took over SSB to form SG-SSB Ltd. in 2003. The nature of business undertaken is banking and related services.

The bank was listed on the exchange in October 13, 1995. The location of registered office is C796 A/3, Ring Road Central, Accra. The registrars of the bank are NTHC Ltd., Martco House, No. D542/4, Okai-Mensah Link, Adabraka, Accra. SG-SSB Legal Department happens to be the company's solicitors and its auditors are Messrs, Ernst & Young, Chartered Accountants, G15 White Avenue, Airport Residential Area – Accra.

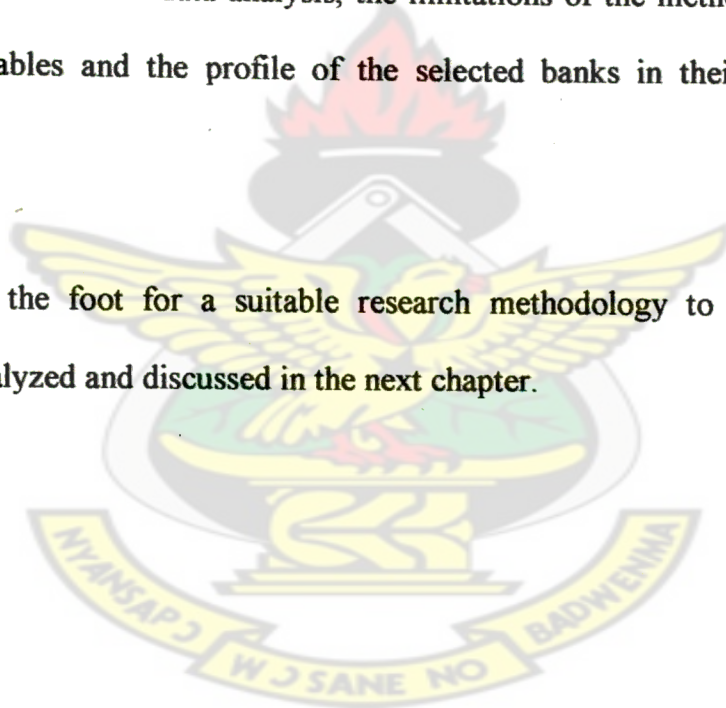
The bank's directors include Gerald Lacaze – Chairman, Allain Bellissard – Managing Director, Alain Hourcade, Michel Maille, Phillipe Vigue, Kofi Ampim, Pierre Wolmarans, Kwaku Osafo, Teresa Ntim (Mrs), Bernard Buyse and Fritz Kwabena Poku and the top management constitute Alain Bellissard – Managing Director, Alain Hourcade – Dep. Managing Director, Bernard buyse – Exc. Dir, Finance & Administration, Joel favriaud – General Inspector, Nobert Conges – General Manager, Ratail, Gilles Louvel – General Manager, Risk, Roger Durrios – Gen. Manager, Org. & HR, Irene Owiredue-Akrofi – Head Treasury Department and Ben Berko – Head Business Banking Department whiles Angela N. Bonsu is the company's secretary.

The Bank had authorized no. of shares of 500,000,000, issued no. of shares of 142,500,000 and a stated capital of €70billion. The bank's financial year ends at December 31 and has SG-SSB as its share code. The holding company Societe Generale has 51% stake in SG-SSB.

### **3.7 CHAPTER SUMMARY**

This chapter was designed to outline the research methodology and profile of Standard Chartered Bank Gh. Ltd., CAL and SG-SSB. Thus, it highlights the data collection and sample techniques, the method of data analysis, the limitations of the methodology, the definition of key variables and the profile of the selected banks in their respective headings.

This chapter has set the foot for a suitable research methodology to achieve the objectives, which is analyzed and discussed in the next chapter.





## **CHAPTER FOUR**

### **RESEARCH ANALYSIS AND DISCUSSION**

#### **4.1 INTRODUCTION**

The preceding chapter emphasizes the data collection and sample technique, the method of data analysis and statistical procedure, the limitations of the methodology, key research working definitions, types of liquidity and profitability ratios adopted for this study and the profile of the selected banks.

On the other hand, this chapter focuses on analyzing the data gathered to establish any relationship between liquidity and profitability of the selected banks to serve as a beacon of hope for users of the financial statement over the years under study.

This chapter has been structured logically and discussed in the following order:

4.2 Empirical research findings

4.3 Empirical research analysis and discussion

4.4 Chapter Summary

This chapter follows accordingly with the above outline.

#### **4.2 EMPIRICAL RESEARCH FINDINGS**

##### **CALCULATION OF RATIOS**

**STANDARD CHARTERED BANK LTD.**

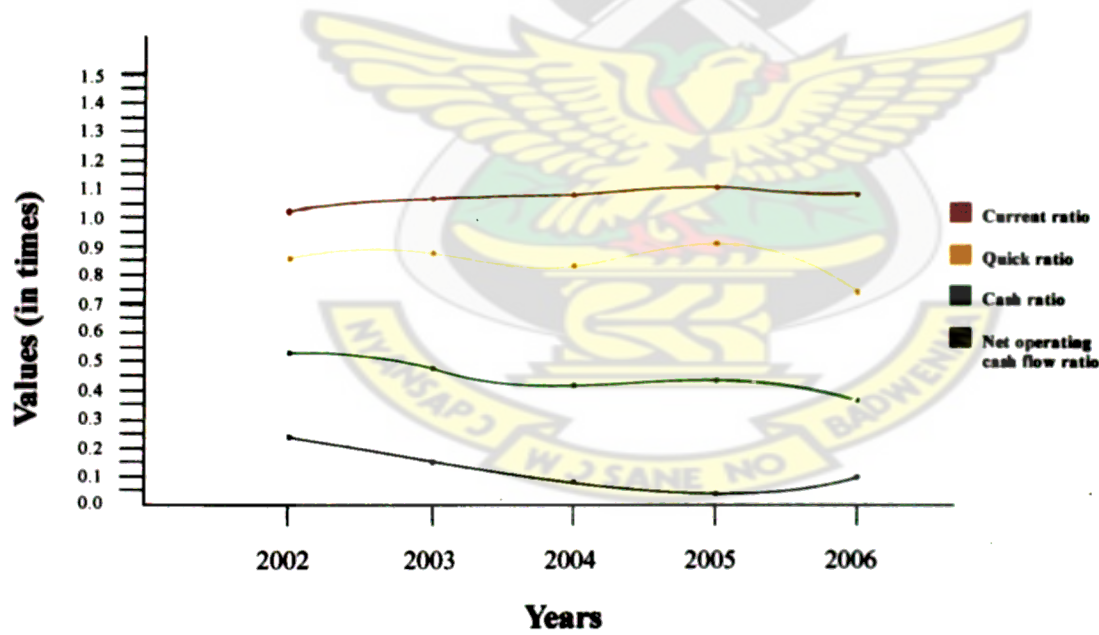
**Table 1.0: ratios calculated for SCB**

RATIOS	2002	2003	2004	2005	2006
<b>LIQUIDITY RATIO</b>					
1) Current ratio	1.03 times	1.07 times	1.08 times	1.12 times	1.09 times
2) Quick ratio	0.86 times	0.88 times	0.84 times	0.92 times	0.75 times
3) Cash ratio	0.53 times	0.48 times	0.42 times	0.44 times	0.37 times
4) Net operating cash flow ratio	0.24 times	0.15 times	0.08 times	0.04 times	0.10 times
<b>PROFITABILITY RATIO</b>					
1) Net profit margin	29.26%	31.70%	32.01%	32.66%	32.74%
2) ROE	46.86%	43.26%	43.49%	35.81%	38.86%
3) ROA	4.34%	4.51%	4.38%	4.51%	3.96%
4) Net asset turnover	0.15 times	0.14 times	0.14 times	0.14 times	0.12 times

**GRAPHICAL ANALYSIS OF RATIOS**

**Fig.1.0: trend analysis for SCB (Liquidity ratios)**

**STANDARD CHARTERED BANK GHANA LTD.**



From Fig.1.0 it can be observed that SCB liquidity movement is somewhat declining. Current ratio experienced a slight increase from 2002 to 2005 and started to fall insignificantly in 2006, a difference of about 0.03 times, even though all the ratios could

not satisfy the rule of thumb, which is 2:1. Quick ratio over the years was not stable. There was ups and downs from 2002 to 2005 when it began to decline significantly in 2006 with a difference of 0.17 times. In the same way, the quick ratios did not meet the rule of thumb which is 1:1. The bank's cash availability saw continuous fall from 2002 to 2006, even though in 2005 it experienced an insignificant increase of 0.02 times over 2004 and dropped further to 0.37 times in 2006 a difference of 0.07 times. The actual cash inflow from all activities to its current liabilities was not encouraging from 2002 to 2005 as there was a sharp decline until 2006 when it started to rise. Looking at the situation presented any stakeholder will ask himself questions concerning the bank's future prospects.

According to the Ashanti Regional Manager, the bank's liquidity instability over the years was as a result of the huge investments in activities such as tangible fixed assets and subsidiaries. This led the bank also to record corresponding huge net cash outflow from investing activities especially in 2002, 2003 and 2006 as it amounted to ₵13,070 million, ₵18,718 million and ₵12,457 million respectively. Coupled with stable increase in dividend paid from 2002 to 2006, the manager admitted that the bank was performing according to plan and no wonder it had ₵375,073 million increase in cash and cash equivalents in 2006 when in 2005 it got a deficit of ₵7,170 million.

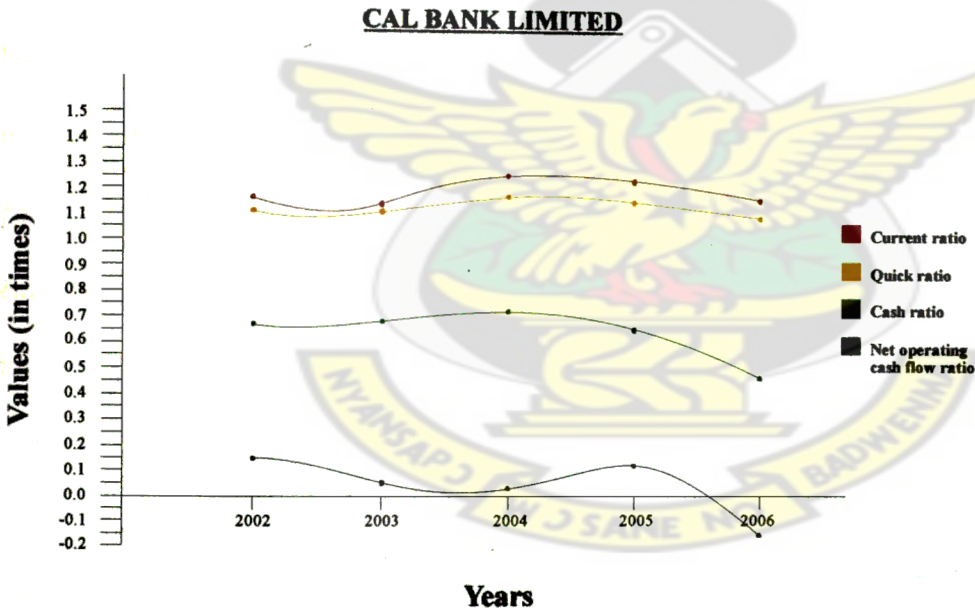
CAL BANK LIMITED

Table 2.0: ratios calculated for CAL

RATIOS	2002	2003	2004	2005	2006
LIQUIDITY RATIO					
1) Current ratio	1.16 times	1.14 times	1.25 times	1.23 times	1.16 times
2) Quick ratio	1.11 times	1.11 times	1.17 times	1.15 times	1.09 times
3) Cash ratio	0.67 times	0.68 times	0.72 times	0.65 times	0.46 times
4) Net operating cash flow ratio	0.15 times	0.05 times	0.03 times	0.12 times	(0.16) times
PROFITABILITY RATIO					
1) Net profit margin	32.73%	27.66%	34.03%	20.59%	25.53%
2) ROE	32.82%	28.97%	20.98%	14.56%	21.93%
3) ROA	4.50%	3.65%	4.22%	2.75%	3.00%
4) Net asset turnover	0.14 times	0.13 times	0.12 times	0.13 times	0.13 times

GRAPHICAL ANALYSIS OF RATIOS

Fig.2.0: trend analysis for CAL (Liquidity ratios)



The liquidity management with respect to CAL as shown in Fig.2.0 is in a critical position. The bank, apart from the ups and downs in liquidity movement over the years, experienced a slightly stable increasing current, quick and cash ratios from 2002 to 2004, even though the current ratios were below the generally accepted 2:1 and quick ratios



rising above the rule of thumb, 1:1. These ratios started declining in 2005 and 2006. The worst situation is where the net operating cash inflow could not have settled the short term debt obligations in 2006. So any potential investor will probe further before making a decision.

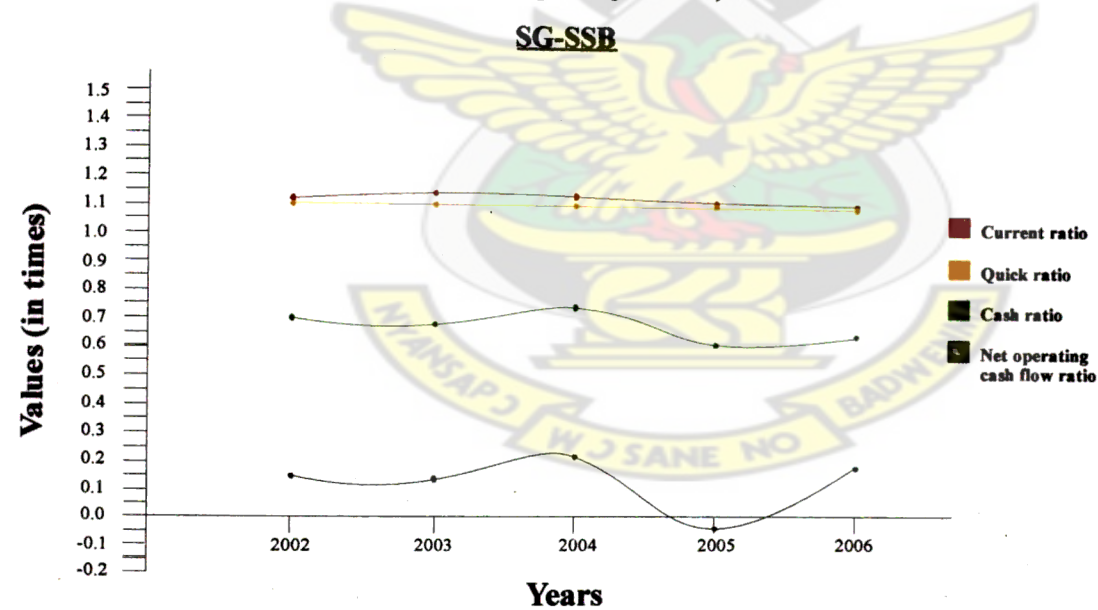
The Ashanti Regional Manager explained that the bank had purchased property and equipment for ₵56,403 million as at 31st December, 2006. This expenditure he stressed was in anticipation of expected future returns. Repayment of loan in 2002, 2003, 2004, 2005 and 2006 at an amount of ₵8,772 million, ₵15,387 million, ₵22,599 million, ₵27,409 million and ₵47,112 million respectively also caused the bank a great deal of money over the period understudy. This is why the bank had gradual increase in cash and bank balances of ₵140,519 million, ₵177,184 million, ₵216,731 million, ₵278,248 million and ₵306,949 million from 2002 to 2006 in that order, he emphasized. This performance results flow is quite different from SCB which inconsistent flow to the extent that in 2005 it had a deficit but yet performed much better than CAL in 2006 with increase cash and cash equivalents of ₵375,073 million.

Table 3.0: ratios calculated for SG-SSB

RATIOS	2002	2003	2004	2005	2006
LIQUIDITY RATIO					
1) Current ratio	1.12 times	1.14 times	1.13 times	1.11 times	1.10 times
2) Quick ratio	1.10 times	1.10 times	1.10 times	1.10 times	1.09 times
3) Cash ratio	0.64 times	0.61 times	0.74 times	0.61 times	0.64 times
4) Net operating cash flow ratio	0.15 times	0.14 times	0.22 times	(0.04) times	0.18 times
PROFITABILITY RATIO					
1) Net profit margin	24.20%	24.58%	25.99%	20.89%	19.20%
2) ROE	27.56%	26.94%	28.81%	23.38%	19.56%
3) ROA	4.17%	4.21%	4.35%	3.19%	2.72%
4) Net asset turnover	0.17 times	0.17 times	0.17 times	0.15 times	0.14 times

GRAPHICAL ANALYSIS OF RATIOS

Fig.3.0: trend analysis for SG-SSB (Liquidity ratios)



As illustrated in Fig.3.0, liquidity management in SG-SSB is quiet stable for current and quick ratios over the years. However, as stated as a rule of thumb for these two ratios, none of the current ratios was twice as the bank’s short term obligations whereas all the

quick ratios were more than 1. Cash ratio experienced ups and downs and begun to pick up in 2006. This was different as far as the net operating cash flow is concern. In 2005, there was a deficit as the bank operating cash inflow could not meet its short term debt obligations. However, there was an increase in 2006 of 0.14 times.

The bank's actual cash in hand problems was as a result of the its huge investments with the aim of achieving higher returns. The bank invested an amount of ₵166,771 million and ₵616,877 million to purchase fixed assets and investments over the period understudy. Coupled with its ability to borrowing to finance operations, dispose of fixed assets and to receive dividends every year even though it could not afford to pay dividends in 2003 among others contributed immensely to the huge cash and cash equivalents recorded in 2002 to 2006 which is ₵565,103 million, ₵588,833 million, ₵658,382 million, ₵541,207 million and ₵983,641 million in that order according to the Area Manager, Kumasi..

This shows that amongst the three banks, SG-SSB performed better since it begun the year with a reasonable amount of cash and cash equivalents followed by CAL and then SCB.

GRAPHICAL ANALYSIS OF PROFITABILITY RATIOS

Fig.1.1: trend analysis for SCB

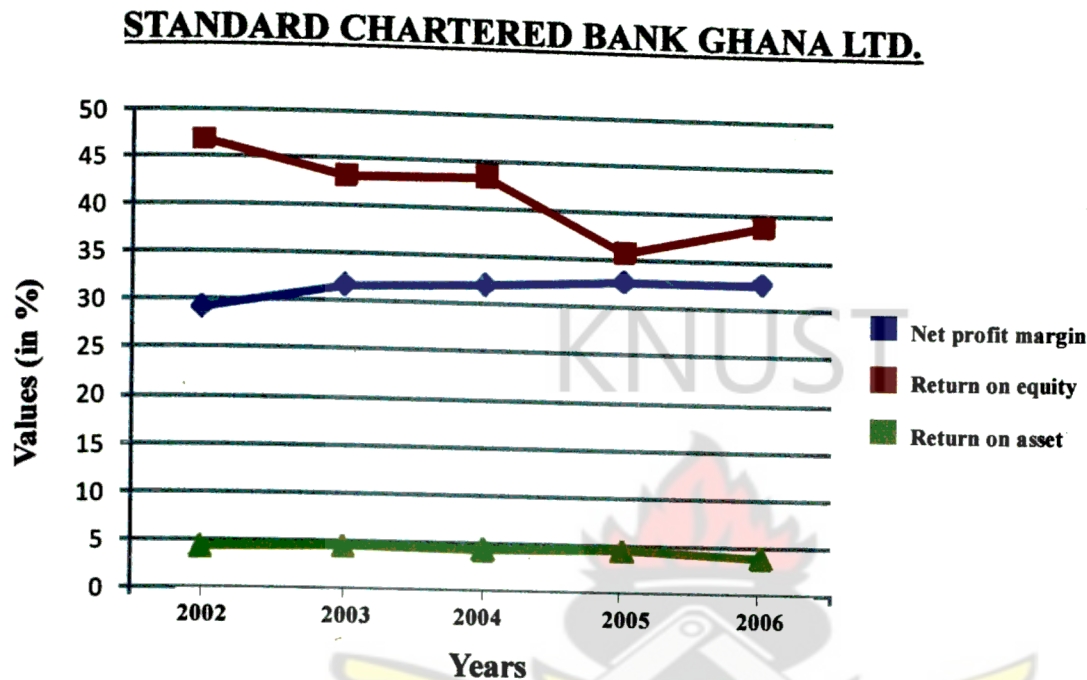
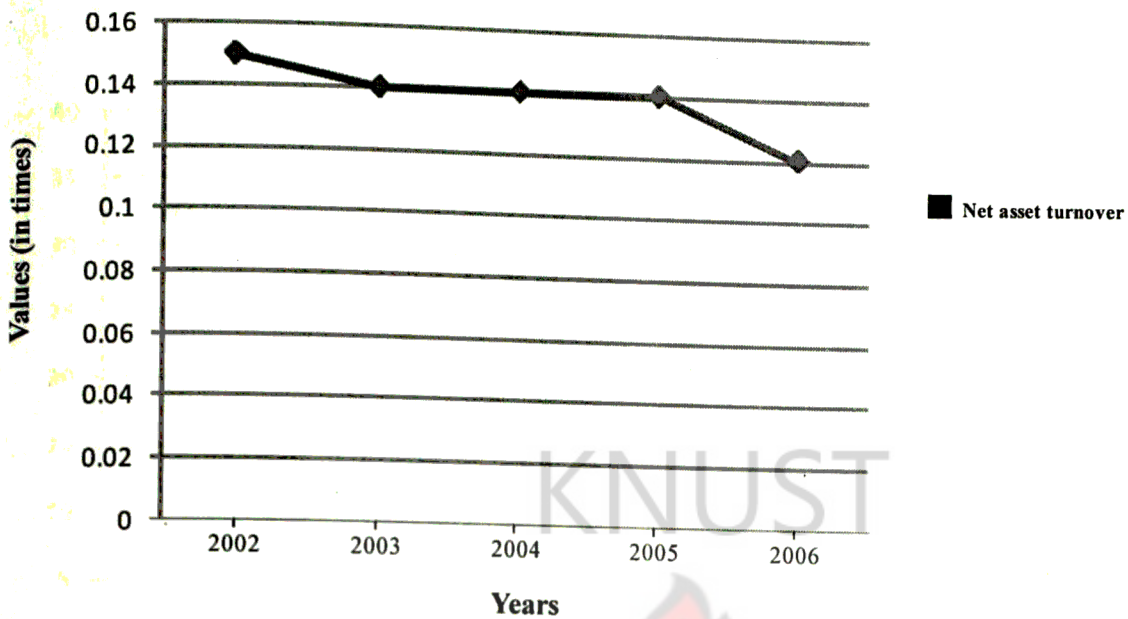


Fig.1.1 above indicates that ROE declined in 2003 by 3.6% and increased a little in 2004 by 0.23%. However, there was a sharp fall in 2005 by 7.68% which later shot up in 2006 by 3.05%, less than half of the fall in 2005. The NPM shows a continuous increase from 29.26% to 32.74% in 2002 to 2006 respectively. Lastly, there was 0.17% increase of ROA in 2003 which fell from 4.51% with a difference of 0.13% in 2004 and later increased back to 4.51% and fell in 2006 by 0.55% to 3.96%.



### STANDARD CHARTERED BANK GHANA LTD.



Net asset turnover as a profitability ratio measured in times as graphically represented above shows a continuous fall from 0.15 times to 0.12 times in 2002 to 2006 respectively, even though it was stable in 2004 and 2005 with 0.14 times.

Fig.2.1: trend analysis for CAL

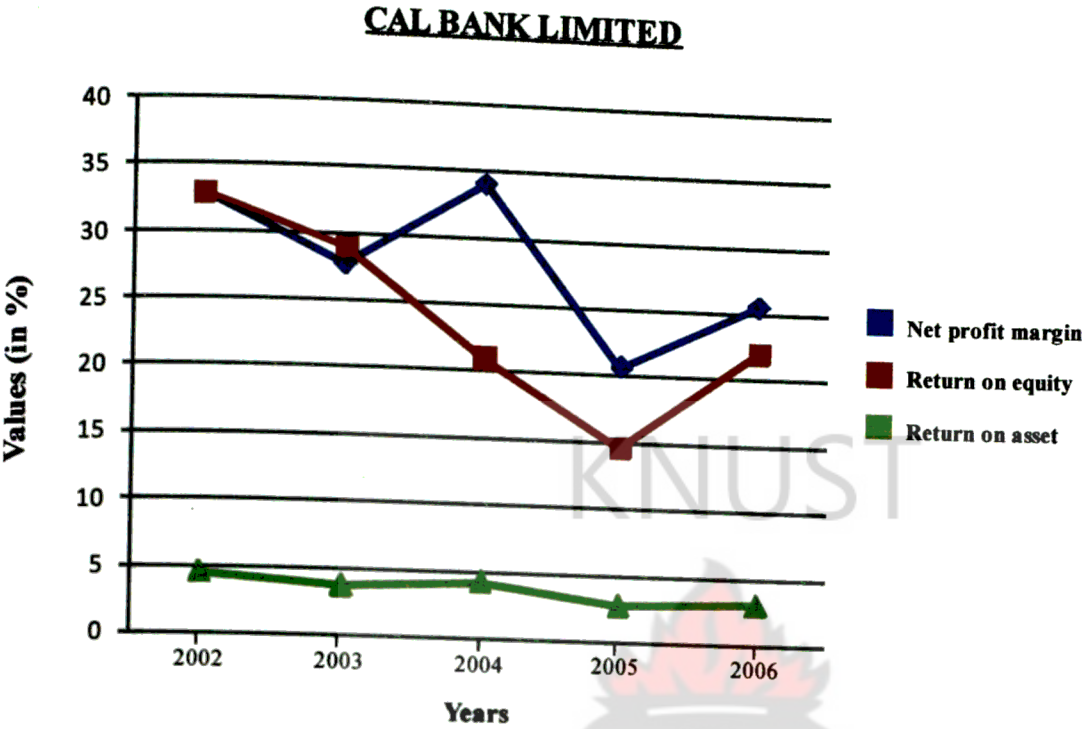
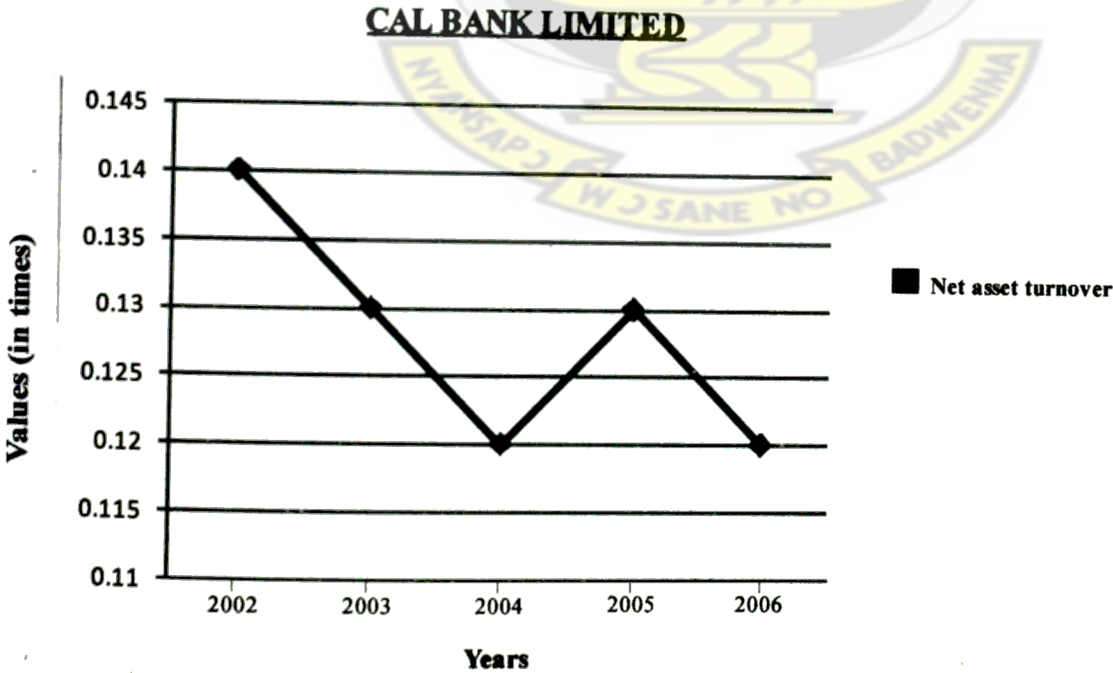


Fig.2.1 depicts that the ROE trend indicates a constant fall from 2002 to 2005 when it started to increase in 2006. The NPM and ROA also show ups and downs trends until they begun to increase in 2006.



The Net asset turnover of CAL decreased sharply from 2002 to 2004 and increased in 2005 to 0.13 times and fell back to 0.12 times as it was in 2004 in 2006.

**Fig.3.1: trend analysis for SG-SSB**  
**SG-SSB**

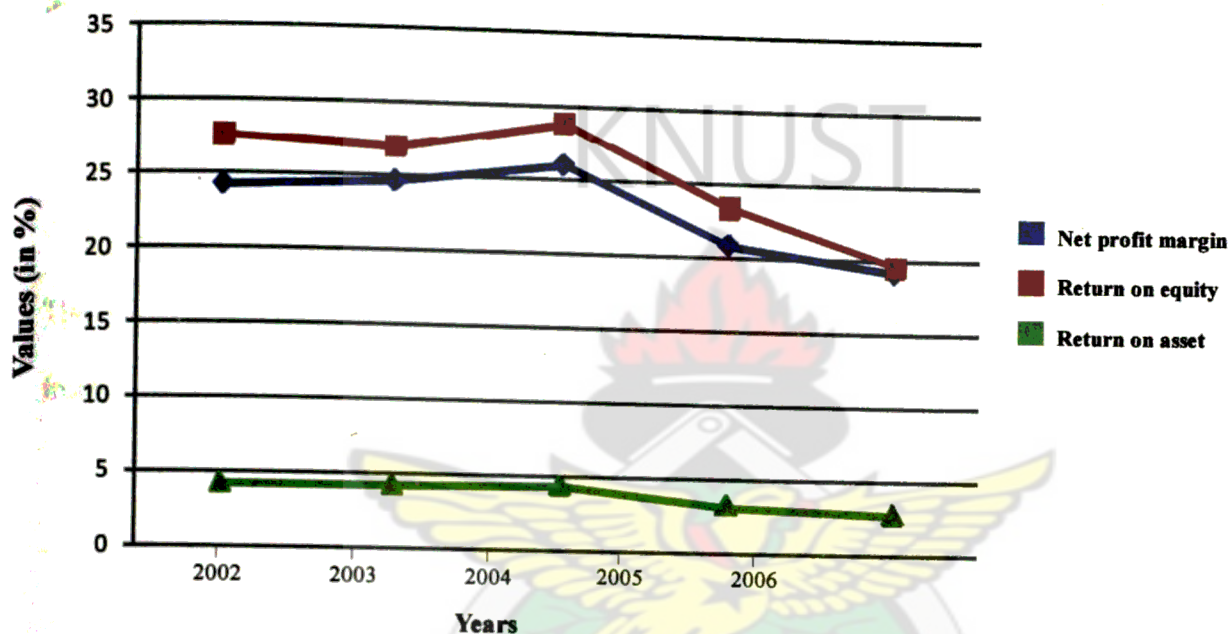
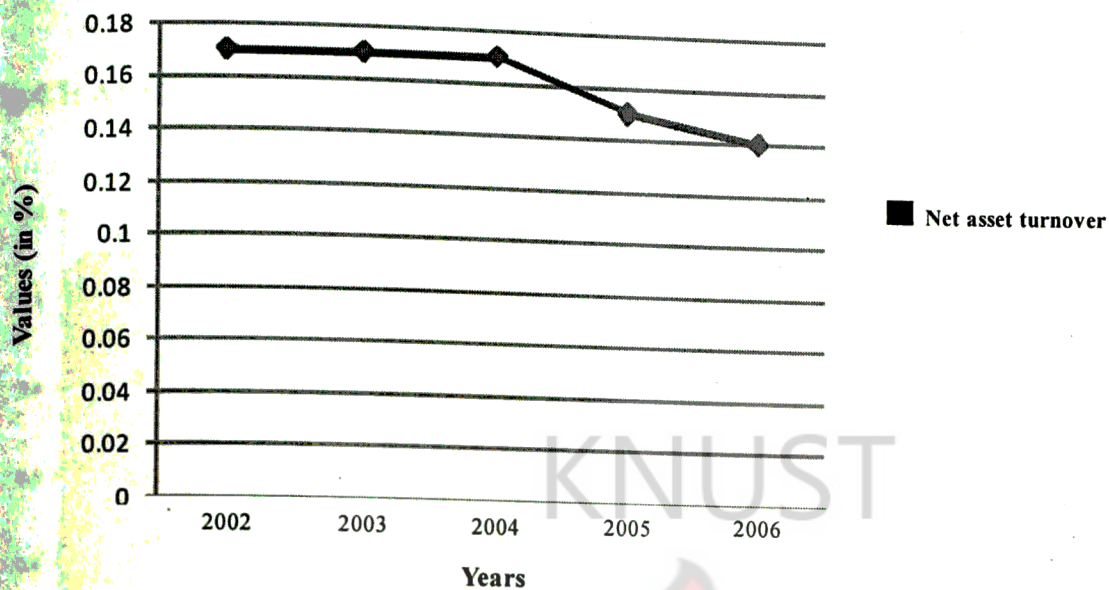


Fig.3.1 shows a more stable increase in ROE, NPM and ROA from 2002 to 2004 and started declining sharply in 2005 and 2006.

### SG-SSB



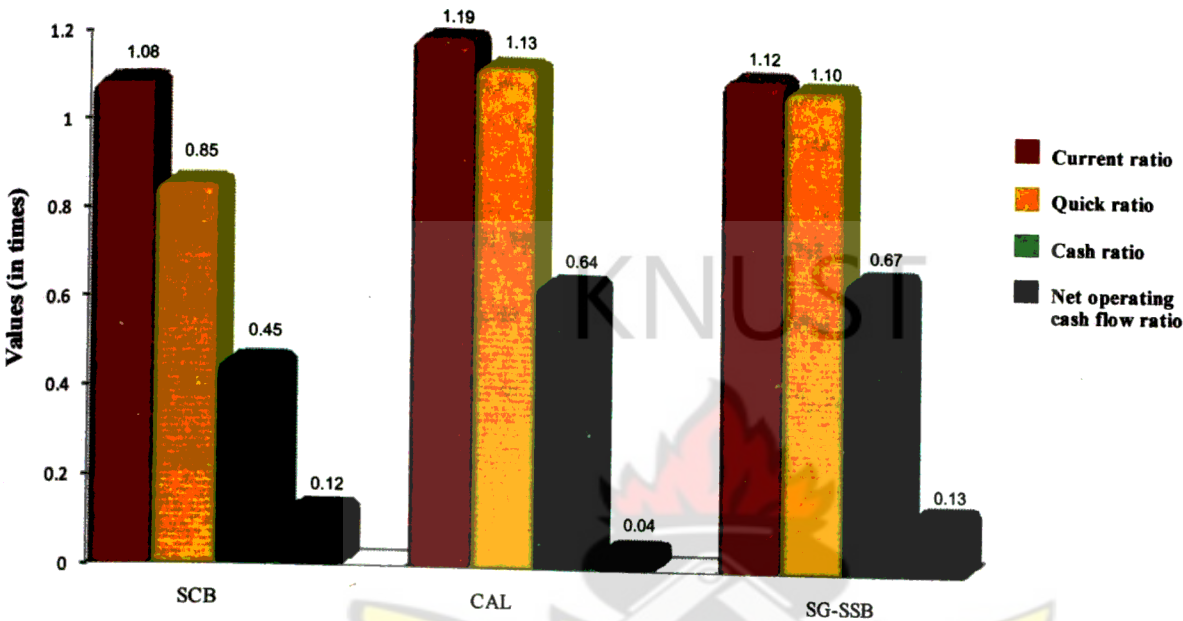
The SG-SSB Net asset turnover as graphically shown above indicates a much stable trend from 2002 to 2004 and declines sharply in 2005 and 2006.





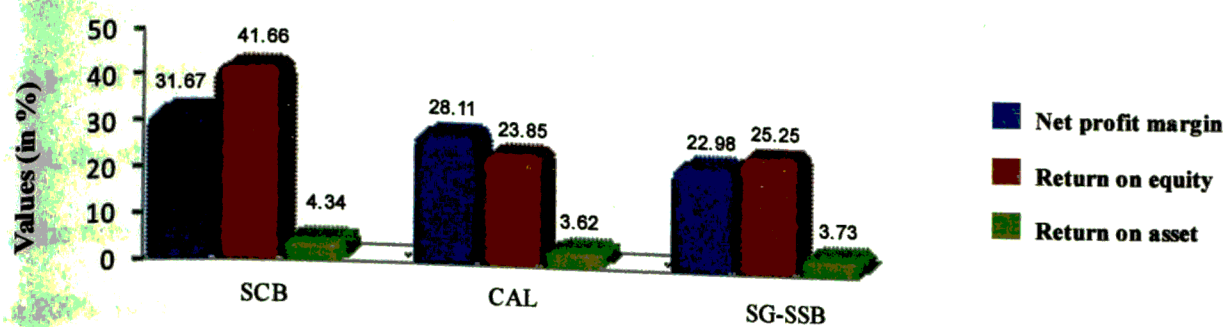
GRAPHICAL INTERBANK AVERAGE RATIO ANALYSIS

Fig.4.1: AVERAGE LIQUIDITY RATIOS

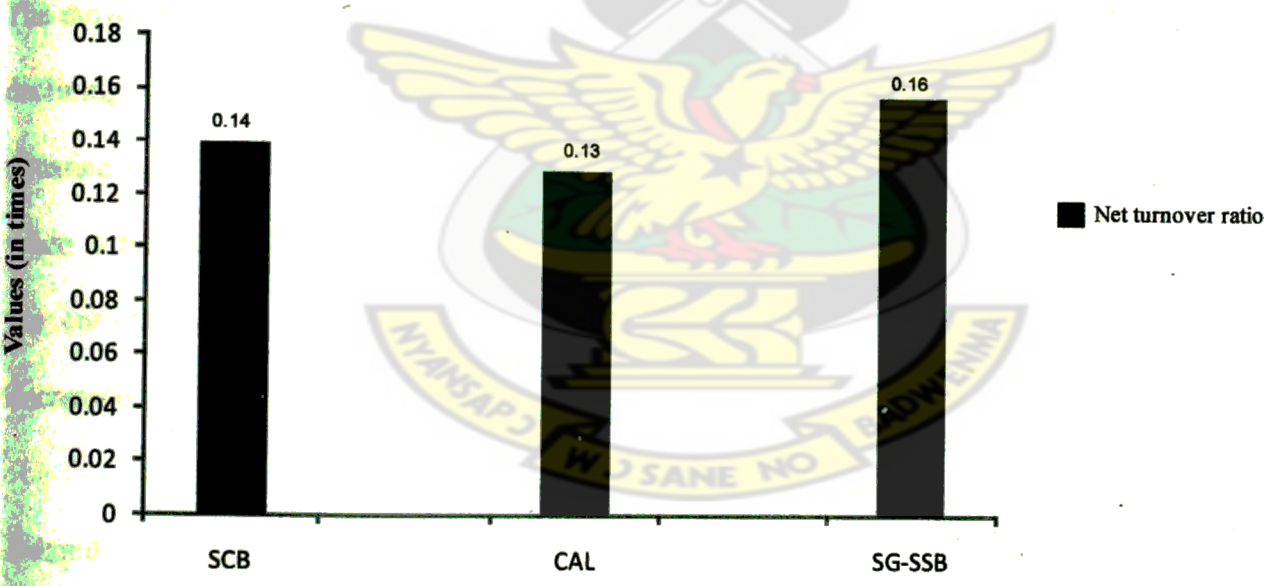


From Fig.4.1 the liquidity ratios for the three banks indicate a more similar levels or flow. Each bank's average current ratio happens to be the largest even though none of them meets the rule of thumb, followed by quick ratio where CAL and SG-SSB exceeded the rule of thumb with 1.13 times and 1.10 times respectively. Only SCB had average quick ratio of 0.85 times which is below the rule of thumb. Then average cash and net operating cash flow ratios follow in that order for all the banks. It must be emphasized that in terms of liquidity SG-SSB performed better followed by CAL and then SCB in that sequence over the period under review.

**Fig.5.1: AVERAGE PROFITABILITY RATIOS**



However, as indicated in Fig.5.1, the ratios are quite different for all the banks. It is only SCB and SG-SSB which had a similar flow where ROE is the highest followed by NPM and ROA in that order. In the case of CAL, NPM is the highest followed by ROE and ROA in that sequence.



The average net asset turnover for SG-SSB happens to be the efficient followed by SCB and CAL in that order as clearly demonstrated above.

Therefore, we can justifiably say that in terms of profitability SCB performed better followed by CAL and SG-SSB in that order.

## **4.3 EMPIRICAL RESEARCH ANALYSIS AND DISCUSSIONS**

### **4.3.1 STANDARD CHARTERED BANK GH. LTD.**

First, the ability of SCB to meet its short term debt obligations, even though it was not up to the rule of thumb stated in chapter two, kept on rising from 2002 to 2005 when it fell in 2006. However, in the case of net profit margin, SCB willingness to control or reduce expenses was achieved as the ratio kept on increasing from 2002 to 2006. This further indicates that it was only in 2006 that the bank experienced a negative relationship between the bank's current ratio and net profit margin – thus, while net profit margin is increasing, current ratio is decreasing.

The movement of the ROE is the opposite of the current ratio trend – thus, while ROE is declining, current ratio is increasing and vice versa. Again, with respect to ROA, the situation is quite irregular. The ROA indicates an up and down movements until in 2006 when it decreased with the bank's current ratio. Last, net asset turnover decreases while the current ratio increases over the years understudy until 2006 when both ratios decreased.

Second, quick ratio of the bank experienced fluctuations over the years while the net profit margin is continuously rising. ROE too fell from 2002 to 2005 when it started rising in 2006. However, in the case of ROA, the movement is the same as the quick ratio. That is, as the quick ratio increases, the ROA behaves accordingly and as it decreases the ROA also decreases. Therefore, the quick ratio and the ROA are positively

related. Last, while net asset turnover is declining, quick ratio is fluctuating over the years, indicating a negative relationship.

Third, as SCB's cash ratio movement declines from 2002 to 2004 and increases in 2005 which later decreases in 2006 the net profit margin rises over the years. The cash ratio vis-à-vis the ROE, ROA and net asset turnover movements are not directly related.

Fourth, the net cash inflow from operating activities to the bank's current liabilities management or trend over the years behaves differently from its ROE, ROA and net asset turnover. However, this liquidity ratio movement is slightly similar to the net asset turnover as both decline from 2002 to 2003 and increase in 2006.

### **4.3.2 CAL BANK LIMITED**

First, the movement of current ratio vis-à-vis the net profit margin and ROA are not directly related. As the net profit margin and ROA have "decrease, increase, decrease and increase" trend. Again, the ROE declines sharply from 2002 to 2005 and increases in 2006 which is different from the movement of the current ratio. As 2003 and 2006 demonstrate a decline in current ratio similar to net asset turnover, the situation is different in 2004 and 2005. This is because in 2004 and 2005 the net asset turnover decreases and increases respectively which is the opposite of the bank's current ratio.



Second, even though CAL's quick ratio meets the rule of thumb, its movements over the years under consideration is different from all the profitability ratios used for this analysis. This is due to the fact that as the bank keeps more cash in anticipation to meeting short term debt obligations its net profit margin and ROA keep on fluctuating, ROE declines sharply from 2002 to 2005 and begins to rise in 2006 and net asset turnover does not follow any stable trend.

Third, the cash ratio increases from 2002 to 2004 and begins to decline in 2005 and 2006. This movement does not indicate any direct relationship with the bank's profitability ratios considered for this research. It is only in 2004 that it increases with net profit margin and ROA, decreases in 2005 with net profit margin, ROE and ROA, and decreases in 2006 with net asset turnover.

Fourth, the net operating cash flow ratio decreases from 2002 to 2004, increases in 2005 and declines to a point where the bank will not have cash from operating activities to meet short term debt obligations when they fall due. Even though, this liquidity ratio movement impact on the profitability of the bank is quite different, the ratio declines with the net profit margin, ROE, ROA and net asset turnover from 2002 to 2003 and proceed to decrease with ROE and net asset turnover, and then increases and decreases in 2005 and 2006 respectively with net asset turnover. This means that there is a direct relationship between the movement of net operating cash flow ratio and net asset turnover ratio of CAL over the years taken into account.

### 4.3.3 SG-SSB

First, as the current ratio increases from 2002 to 2003 it declines from 2004 to 2006. This liquidity management movement is not directly related to the profitability levels of the bank. However, the decline in the current assets to current liabilities control from 2004 to 2006 reflects a direct relationship with all the profitability ratios considered for this research in terms of its movement. While it only increases with net profit margin and ROA from 2002 to 2003 and net asset turnover moving in a straight line from 2002 to 2004, it moves in an opposite direction with ROE from 2002 to 2004.

Second, even though the quick ratio meets the rule of thumb, it does not reflect any direct link with the profitability ratios. It however indicates that the bank holds cash more than expected since the ratio even exceeds the rule of thumb which is 1:1. It can also be observed that there is no relationship between the quick ratio and the profitability ratios considered. This is because as the quick ratio moves in a straight line from 2002 to 2005 and declines in 2006, all the profitability ratios start to decline from 2004 to 2006, except net asset turnover which moves in a straight line with the liquidity ratio from 2002 to 2004.

Third, as the actual cash available to the bank, excluding receivables, behaves irregularly in movement over the years understudy, the trend of profitability ratios behave differently, except ROE which moves in the same direction with the cash ratio up to 2005 when it continues to fall as the cash ratio begins to rise in 2006. It again rises in 2004

with ROE, net profit margin and ROA when net asset turnover only declines with it in 2005.

Fourth, the net operating cash flow ratio over the years represents an unstable movement. The movement in 2005 suggests that the bank could not afford to settle its short term debt obligations as they fall due. However, this liquidity ratio movement does not have any direct link with the profitability ratios even though all the ratios decline in 2005. The ROE continues to move in the same direction with the liquidity ratio from 2002 to 2005 when it proceeds to fall whereas net operating cash flow ratio rises in 2006.

#### 4.4 CHAPTER SUMMARY

The whole chapter seeks to assess the impact of liquidity on profitability: a case study of banks listed on the Ghana Stock Exchange from 2002 to 2006. The researcher used basically trend analysis to assess the impact of liquidity on profitability.

A highlight of results from calculated ratios, from appendix i, for both liquidity and profitability is given to aid readers to better understand the graphical presentation of the trend analysis employed for this study.

It was also identified in the study that there is a significant negative relationship between liquidity and profitability for the sampled banks from 2002 to 2006, even though only two liquidity ratios, quick ratio of SCB and net operating cash flow ratio of CAL, showed

a positive relationship with profitability ratios, ROA and net asset turnover ratios respectively. Again, SG-SSB which performed better than the two banks in terms of average liquidity could not maintain that position in terms of average profitability. SCB which performed much worse than the other banks as far average liquidity is concerned, outperformed the two banks in terms of average profitability.

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## **CHAPTER FIVE**

### **SUMMARY, RECOMMENDATIONS AND CONCLUSION**

#### **5.1 INTRODUCTION**

The earlier chapters have brought out facts necessary to ensure that this study becomes successful. The first chapter dwells on the general research introduction and context, followed by the literature review of the whole study which is dealt with in the second chapter, then, the third chapter focuses on the methods employed to gather data for analysis and discussion and the profile of the selected banks and lastly, the fourth chapter brings out the research findings and further deals with the empirical research analysis and discussion.

Nevertheless, this chapter which happens to be the last chapter for the study emphasizes on the summary of findings for each objective set out in chapter one, general recommendations with the aim of achieving the objectives for this study, recommendations for further studies and conclusion on the whole study.

## **5.2 SUMMARY OF FINDINGS**

The findings of this study have been structured in such a way that the objectives for this research as stated in chapter one are summarized accordingly.

### **5.2.1 LIQUIDITY TREND FOR THE SELECTED BANKS**

We can however summarize based on the findings in chapter four that the liquidity trend of SCB did not show a stable upward progression from 2002 to 2006. It only demonstrated an up and down situation for quick ratio whereas continuous fall was the mark of cash and net operating cash flow ratios. Except current ratio which showed an increase in movement from 2002 to 2005 and drops in 2006.

Again, CAL Bank's liquidity trend did not portray an improved performance over the years. However, it kept on falling for all the ratios to the extent that in 2006 the net cash inflow from operating activities could not meet the current liabilities, hence, a negative net operating cash flow ratio.

Lastly, in the case of SG-SSB, the downward and upward trend experienced over the years was not different. This occurred consistently for current ratio, cash ratio and net operating cash flow ratio, except for, quick ratio which had a straight line from 2002 to 2005 indicating a yearly improvement and dropped insignificantly in 2006.

## **5.2.2 PROFITABILITY TREND FOR THE SELECTED BANKS**

In nutshell, the profitability trend of SCB demonstrated inconsistent upward and downward situation from 2002 to 2006 in relation to all the profitability ratios considered for this research, except for, net profit margin which showed much consistent year after year improvement in performance.

Similarly, CAL Bank's trend of profitability from 2002 to 2006 also portrayed an up and down situation. However, emphasis must be placed on the fact that in 2006 they all showed an improvement over the previous year, except, net asset turnover ratio which showed similar performance.

As a last point, in case of SG-SSB, the profitability trend was not different from the trend behaviours of the other two banks. However, the decline in the trend was insignificant over the years and we must also point out that in 2006, all the profitability ratios considered for this study showed a less performance over the previous years.

## **5.2.3 RELATIONSHIP BETWEEN LIQUIDITY AND PROFITABILITY**

In this study, the liquidity trend of SCB is generally not related to its profitability trend over the accounting year considered for this research. However, it must be stated that only quick ratio trend moves directly to the bank's Return on Asset. Thus, the changes in liquidity as measured by quick ratio have a positive impact on profitability as measured by Return on Asset.

Again, liquidity movement of CAL is not generally related to the profitability movements over the financial years taken into account for this study. Nevertheless, emphasis must be placed on the fact that only net operating cash flow ratio trend had a direct influence on the bank's net asset turnover ratio trend.

Finally, no liquidity ratio trends considered for this research showed a positive relationship with the profitability ratio trends used. This further suggests that as far as SG-SSB is concerned liquidity has a negative relationship with profitability levels over the accounting years considered for this research.

### **5.3 RECOMMENDATIONS BASED ON FINDINGS TO BANKS**

Liquidity is a company's ability to pay the bills as they come due. And in light of the fact that "Cash is king" (Checkley, 1999), the researcher recommends the following ways to banks if they wish to improve their liquidity:

First, banks should use sweep accounts through financial institution. This will allow them to earn interest on any excess cash balances by "sweeping" or transferring the funds into an interest-bearing account when the funds are not needed and sweeping them back to operating account when the need arises.

Second, they should assess their overhead costs and see if there are opportunities to decrease them. Lowering overhead has a direct impact on profitability. Overhead



expenses, including rent, advertising, indirect labor and professional fees, are indirect expenses that you incur to operate the business outside of direct labor.

Third, banks which are just storing unproductive assets must plan to get rid of them. The only reason a bank should consider when spending money on assets such as property, plant and equipments, buildings, vehicles etc. is revenue generation.

Fourth, banks should monitor accounts receivables effectively to ensure that they are billing customers properly and that the banks are receiving prompt payments when there are outstanding loans.

Fifth, banks should negotiate longer payment terms with their creditors whenever possible to keep money longer to meet their transactional, precautionary and speculative motives.

Sixth, banks should monitor the amount of money that is being taken out of the business for non-business purposes such as for social responsibilities. Taking too much money out can put an unnecessary cash drain on the business.

Seventh, banks should review the profitability on their various products and services provided to its customers to assess where prices can be increased on a regular basis to maintain or increase profitability. This is based on the fact that as costs increase and markets change, prices may need to be adjusted as well.

On the basis of the recommendations outlined above, the researcher generally recommends that banks and other firms manage their working capital in more efficient ways, which means management of current assets and current liabilities, and financing these current assets. If these are properly implemented, it will ultimately increase profitability of these companies.

#### **5.4 RECOMMENDATIONS FOR FURTHER STUDIES**

The researcher after doing an in-depth study thinks that there are other areas that can be researched into to establish a more detailed relationship and provide the basis for advising management accordingly in the future. Therefore, we make the following recommendations to be further studied into:

First, we suggest that further research be conducted on the same topic with different companies and extending the years of the sample. The scope of further research may be extended to the working capital components management including cash, marketable securities, receivables and inventory management.

Second, we recommend that people assess the effect of banks investing idle cash on organizational performance and the possibility of these banks going bankrupt over a certain period of time using appropriate assessment models.

Third, we recommend that this study be extended to cover more than three (3) banks listed on the Ghana Stock Exchange, at least half of the number of banks listed on the Exchange and should include at least 2008 if up-to-date data is available.

Fourth, research on the effect of liquidity on profitability can be conducted for manufacturing firms listed on the Ghana Stock Exchange and consideration should also be given to those unlisted.

Fifth, the same research topic can be performed for banks not listed on the Ghana Stock Exchange over the same period to establish a relationship between the effects of liquidity on profitability as far as listed and unlisted banks are concerned in terms of their trend movements using suitable liquidity and profitability ratios.

Sixth, as stated by Van Home and Wachowicz (2000) that excessive levels of current assets can easily result in a firm's realizing a substandard return on investment. Conversely, firms with too few current assets may incur shortages and difficulties in maintaining smooth operation. The researcher recommends that people study into the effect of liquidity shortages on organizational performance.

Seventh, we strongly recommend that this same topic be conducted for sampled rural banks in Ghana using unbiased sampling method and appropriate liquidity and profitability ratios to ascertain a relationship between the commercial banks and the rural



banks in terms of their business activities in striving to meet the expectations of stakeholders.

## 5.5 CONCLUSION

The ultimate objective of any firm is to maximize profit. But, preserving liquidity of a bank is an important objective too. The problem is that increasing profits at the cost of liquidity can bring serious problems to the firm. Therefore, there must be a trade off between these two objectives of the firms. One objective should not be at cost of the other because both have their importance. If we do not care about profit, we can not survive for a longer period. On the other hand, if we do not care about liquidity, we may face the problem of insolvency or bankruptcy. For these reasons working capital management should be given proper consideration and will ultimately affect the profitability of the firm.

It must be emphasized that shareholders' dividends are paid with cash, not profit, and the timing and associated risk of dividend payments are important factors in the determination of shareholder wealth. Therefore, the researcher concludes that maximization of profit is not a suitable substitute objective for maximization of shareholder wealth. This is not to say that banks do not need to pay attention to their profit figures, since falling profits or profit warnings are taken by the financial markets as a sign of financial weakness. In addition, profit targets can serve a useful purpose in



helping a company achieve short-term or operational objectives within its overall strategic plan.

Finally, the researcher concludes this study, which covers 2002 to 2006 financial statements of SCB, CAL and SG-SSB, by concurring with Deloof (2003), Eljelly (2004) and Shin and Soenan (1998) who found a strong negative relationship between the measures of working capital management and corporate profitability, based on the findings identified in chapter four that our alternate hypothesis that there is no relationship between liquidity and profitability of the selected banks and banks in general is the one to be accepted; and therefore we reject null hypothesis. This is basically based on the nature of business of banks and their strategic plans for survival.



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## Appendix i

### **STANDARD CHARTERED BANK GH. LIMITED** **CONSOLIDATED PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED 31<sup>ST</sup> DEC.**

	<u>2006</u> €'million	<u>2005</u> €'million	<u>2004</u> €'million	<u>2003</u> €'million	<u>2002</u> €'million
Net Interest Income	543,080	441,330	352,202	333,920	285,791
Commission, fees & other opt. income	<u>302,515</u>	<u>269,424</u>	<u>249,280</u>	<u>222,065</u>	<u>161,334</u>
	845,595	710,754	601,482	555,985	447,125
<b>EXPENSES:</b>					
Total operating exp.& chgc for doubtful debts	410,277	356,402	296,647	259,216	231,721
Exceptional item	-	-	-	-	-
Profit before tax	<u>435,318</u>	<u>354,352</u>	<u>304,835</u>	<u>296,769</u>	<u>215,404</u>
Taxation	<u>158,497</u>	<u>122,200</u>	<u>112,294</u>	<u>120,510</u>	<u>84,582</u>
	276,821	232,152	192,541	176,259	130,822

### **CONSOLIDATED BALANCE SHEET AS AT 31<sup>ST</sup> DECEMBER**

	<u>2006</u> €'million	<u>2005</u> €'million	<u>2004</u> €'million	<u>2003</u> €'million	<u>2002</u> €'million
<b>FIXED ASSETS</b>					
Fixed Assets	121,122	121,453	141,603	166,952	184,178
<b>CURRENT ASSETS</b>					
Cash & Balances with BOG	556,088	321,218	418,222	776,686	850,508
Gov't Securities & Due from other banks	1,787,088	1,635,230	1,255,359	905,453	586,580
Advances	2,393,020	2,160,603	1,636,744	1,410,759	921,775
Other Assets Accounts	287,418	217,393	337,665	221,854	135,812
Taxation	-	36,560	50,717	13,962	9,582
Medium term investment	<u>1,850,000</u>	<u>650,000</u>	<u>557,566</u>	<u>410,110</u>	<u>322,696</u>
	6,873,614	5,021,004	4,256,273	3,738,824	2,826,953
<b>LESS CURRENT LIABILITIES</b>					
Deposits & Current Accounts	5,178,823	3,744,446	3,306,645	2,817,945	2,174,769
Creditors & Accruals	729,427	730,098	581,469	628,057	463,709
Medium Term Loan	350,000	-	45,345	44,235	83,520
Deferred Taxation	<u>24,195</u>	<u>19,576</u>	<u>21,695</u>	<u>8,100</u>	<u>9,956</u>
	6,873,614	5,021,004	4,256,273	3,738,824	2,826,953
Working Capital	<u>591,169</u>	<u>526,884</u>	<u>301,119</u>	<u>240,487</u>	<u>94,999</u>
<b>TOTAL ASSETS</b>	712,291	648,337	442,722	407,439	279,177

	<u>2006</u> £'million	<u>2005</u> £'million	<u>2004</u> £'million	<u>2003</u> £'million	<u>2002</u> £'million
<b><u>SHAREHOLDERS' FUNDS</u></b>					
Stated Capital	131,313	131,313	40,405	40,405	40,405
Capital Surplus	60,270	60,270	60,270	60,270	60,638
Income Surplus & Statutory Reserve	<u>520,708</u>	<u>456,754</u>	<u>342,047</u>	<u>306,764</u>	<u>178,134</u>
	712,291	648,337	442,722	407,439	279,177

**ABSTRACT FROM CASH FLOW STATEMENT FOR THE YEAR ENDED 31<sup>ST</sup>**  
**DECEMBER**

	<u>2006</u> £'million	<u>2005</u> £'million	<u>2004</u> £'million	<u>2003</u> £'million	<u>2002</u> £'million
Net Cash Inflow from operating activities	645,977	179,160	308,186	539,566	649,558



**CAL BANK LIMITED**  
**CONSOLIDATED PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED 31<sup>ST</sup> DEC.**

	<u>2006</u>	<u>2005</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>
	€'million	€'million	€'million	€'million	€'million
Net Interest Income	94,447	80,984	49,126	33,725	25,537
Commission, fees & other opt. income	87,639	47,551	52,374	43,187	30,551
Other Income	<u>2,072</u>	<u>1,173</u>	<u>832</u>	<u>669</u>	<u>178</u>
	184,158	129,708	102,332	77,581	56,268
<b>EXPENSES:</b>					
Total operating expenses	88,435	68,626	48,811	36,394	28,217
Doubtful debts	27,700	16,532	7,890	7,454	3,984
Exceptional items	-	-	-	-	<u>5,238</u>
Profit before tax	<u>68,023</u>	<u>44,550</u>	<u>45,631</u>	<u>33,733</u>	<u>29,307</u>
Taxation	<u>21,010</u>	<u>17,847</u>	<u>10,812</u>	<u>12,274</u>	<u>10,890</u>
Profit after tax	47,013	26,703	34,819	21,459	18,415

**CONSOLIDATED BALANCE SHEET AS AT 31<sup>ST</sup> DECEMBER**

	<u>2006</u>	<u>2005</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>
	€'million	€'million	€'million	€'million	€'million
<b><u>CURRENT ASSETS</u></b>					
Cash & short-term funds	306,949	278,248	216,731	33,847	19,473
Gov't Securities	315,066	230,811	255,044	317,782	217,244
Advances	856,801	397,920	301,317	217,903	155,135
Other Assets Accounts	<u>91,268</u>	<u>64,307</u>	<u>52,443</u>	<u>18,291</u>	<u>17,343</u>
	1,570,084	971,286	825,535	587,823	409,195
<b><u>LESS CURRENT LIABILITIES</u></b>					
Deposits & Current Accounts	850,329	607,812	480,345	335,945	229,255
Creditors & Accruals	28,818	16,564	55,093	48,057	39,222
Borrowings-due within one year	467,931	160,050	121,897	121,229	78,730
Deferred Taxation	8,621	3,452	2,225	7,153	4,677
Taxation	-	-	-	<u>1,365</u>	<u>1,196</u>
	1,355,699	787,878	659,560	513,749	353,080
<b>TOTAL ASSETS</b>	<b>214,385</b>	<b>183,408</b>	<b>165,975</b>	<b>74,074</b>	<b>56,115</b>

	<u>2006</u>	<u>2005</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>
	€'million	€'million	€'million	€'million	€'million
<b><u>SHAREHOLDERS' FUNDS</u></b>					
Stated Capital	71,429	71,428	70,588	6,578	6,578
Statutory Reserve Fund	59,369	47,994	22,386	18,521	15,936
Capital Surplus	27,231	31,371	32,823	3,996	3,996
Income Surplus	<u>56,356</u>	<u>32,615</u>	<u>40,178</u>	<u>44,979</u>	<u>29,605</u>
	214,385	183,408	165,975	74,074	56,115

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**ABSTRACT FROM CASH FLOW STATEMENT FOR THE YEAR ENDED 31<sup>ST</sup>**  
**DECEMBER**

	<u>2006</u>	<u>2005</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>
	€'million	€'million	€'million	€'million	€'million
Net Cash Inflow from operating activities	(211,949)	94,111	20,228	26,603	52,582





**SG-SSB**  
**CONSOLIDATED PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED 31<sup>ST</sup> DEC.**

	<u>2006</u> £'million	<u>2005</u> £'million	<u>2004</u> £'million	<u>2003</u> £'million	<u>2002</u> £'million
Net Interest Income	315,945	283,972	245,731	232,272	174,128
Commission, fees & other opt. income	187,316	150,285	139,761	118,173	119,708
Other Income	<u>14,560</u>	<u>10,214</u>	<u>22,999</u>	<u>7,264</u>	<u>1,353</u>
	517,821	444,471	408,491	357,709	295,189

**EXPENSES:**

Total operating exp.& chge for doubtful debts	349,412	290,709	239,821	237,385	160,238
Exceptional items	<u>24,769</u>	<u>5,654</u>	<u>-</u>	<u>5,791</u>	<u>17,919</u>
Profit before tax	143,640	148,108	168,670	114,533	117,032
Taxation	<u>44,200</u>	<u>55,251</u>	<u>62,521</u>	<u>26,608</u>	<u>45,602</u>
Profit after tax	99,440	92,857	106,149	87,925	71,430

**CONSOLIDATED BALANCE SHEET AS AT 31<sup>ST</sup> DECEMBER**

	<u>2006</u> £'million	<u>2005</u> £'million	<u>2004</u> £'million	<u>2003</u> £'million	<u>2002</u> £'million
<b><u>FIXED ASSETS</u></b>					
Fixed Assets	193,981	117,442	104,226	78,098	81,151
<b><u>CURRENT ASSETS</u></b>					
Cash & Short-term funds	983,641	541,207	658,382	588,833	567,191
Gov't Securities	1,023,620	983,362	878,691	607,856	456,375
Advances	1,416,486	1,241,003	744,617	746,277	577,843
Other Assets Accounts	36,372	25,395	25,331	23,919	24,417
Taxation	-	5,606	27,391	44,239	4,512
Investments (Subs & Trade)	510	511	528	528	1,106
Investments in Assoc. Coy's	-	-	-	-	-
	3,460,629	2,797,084	2,334,940	2,011,652	1,631,444
<b><u>LESS CURRENT LIABILITIES</u></b>					
Deposits & Current Accounts	2,367,711	1,787,250	1,579,923	1,263,210	1,021,584
Creditors & Accruals	289,967	278,340	243,313	266,214	165,708
Borrowings-due within one year	483,293	446,205	241,931	228,351	251,596
Deferred Taxation	<u>5,377</u>	<u>5,573</u>	<u>5,573</u>	<u>5,573</u>	<u>14,531</u>
	3,146,348	2,517,368	2,070,740	1,763,348	1,453,419
Working Capital	314,281	279,716	264,200	248,304	178,024
Less long-term liability	-	-	-	-	-
<b>TOTAL ASSETS</b>	<u>508,262</u>	<u>397,158</u>	<u>368,426</u>	<u>326,402</u>	<u>259,176</u>

	<u>2006</u>	<u>2005</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>
	¢'million	¢'million	¢'million	¢'million	¢'million
<u>SHAREHOLDERS' FUNDS</u>					
Stated Capital	70,000	70,000	6,735	6,735	6,735
Share Deals Account	29,438	29,438	29,438	29,438	262
Capital Surplus	92,327	16,538	16,538	16,538	16,538
Income Surplus & Reserve	<u>316,497</u>	<u>281,182</u>	<u>315,715</u>	<u>273,691</u>	<u>235,641</u>
	508,262	397,158	368,426	326,402	259,176

**ABSTRACT FROM CASH FLOW STATEMENT FOR THE YEAR ENDED 31<sup>ST</sup>**  
**DECEMBER**

	<u>2006</u>	<u>2005</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>
	¢'million	¢'million	¢'million	¢'million	¢'million
Net Cash Inflow from operating activities	567,389	(91,226)	452,052	253,261	221,071



Appendix ii

**CALCULATION OF AVERAGE LIQUIDITY AND PROFITABILITY RATIOS**

**1. Standard Chartered Bank Gh. Ltd**

**AVERAGE LIQUIDITY RATIOS**

- i) Current Ratio =  $\frac{1.09 + 1.12 + 1.08 + 1.07 + 1.03}{5}$  = 1.08 times
- ii) Quick Ratio =  $\frac{0.75 + 0.92 + 0.84 + 0.88 + 0.86}{5}$  = 0.85 times
- iii) Cash Ratio =  $\frac{0.37 + 0.44 + 0.42 + 0.48 + 0.53}{5}$  = 0.45 times
- iv) Net Operating Cash Flow Ratio =  $\frac{0.10 + 0.04 + 0.08 + 0.15 + 0.24}{5}$  = 0.12 times

**AVERAGE PROFITABILITY RATIOS**

- i) Net Profit Margin =  $\frac{32.74\% + 32.66\% + 32.01\% + 31.70\% + 29.26\%}{5}$  = 31.67%
- ii) Return on Equity =  $\frac{38.86\% + 35.81\% + 43.49\% + 43.26\% + 46.86\%}{5}$  = 41.66%
- iii) Return on Asset =  $\frac{3.96\% + 4.51\% + 4.38\% + 4.51\% + 4.34\%}{5}$  = 4.34%
- iv) Net Asset Turnover =  $\frac{0.12 + 0.14 + 0.14 + 0.14 + 0.15}{5}$  = 0.14 times

**2. Cal Bank Ltd.**

**AVERAGE LIQUIDITY RATIOS**

- i) Current Ratio =  $\frac{1.16 + 1.23 + 1.25 + 1.14 + 1.16}{5}$  = 1.19 times
- ii) Quick Ratio =  $\frac{1.09 + 1.15 + 1.17 + 1.11 + 1.11}{5}$  = 1.13 times
- iii) Cash Ratio =  $\frac{0.46 + 0.65 + 0.72 + 0.68 + 0.67}{5}$  = 0.64 times

$$\text{iv) Net Operating Cash Flow Ratio} = \frac{(0.16) + 0.12 + 0.03 + 0.05 + 0.15}{5} = 0.04 \text{ times}$$

### AVERAGE PROFITABILITY RATIOS

$$\text{i) Net Profit Margin} = \frac{25.53\% + 20.59\% + 34.03\% + 27.66\% + 32.73\%}{5} = 28.11\%$$

$$\text{ii) Return on Equity} = \frac{21.93\% + 14.56\% + 20.98\% + 28.97\% + 32.82\%}{5} = 23.85\%$$

$$\text{iii) Return on Asset} = \frac{3.00\% + 2.75\% + 4.22\% + 3.65\% + 4.50\%}{5} = 3.62\%$$

$$\text{iv) Net Asset Turnover} = \frac{0.12 + 0.13 + 0.12 + 0.13 + 0.14}{5} = 0.13 \text{ times}$$

### 3. SG-SSB

### AVERAGE LIQUIDITY RATIOS

$$\text{i) Current Ratio} = \frac{1.10 + 1.11 + 1.13 + 1.14 + 1.12}{5} = 1.12 \text{ times}$$

$$\text{ii) Quick Ratio} = \frac{1.09 + 1.10 + 1.10 + 1.10 + 1.10}{5} = 1.10 \text{ times}$$

$$\text{iii) Cash Ratio} = \frac{0.64 + 0.61 + 0.74 + 0.68 + 0.70}{5} = 0.67 \text{ times}$$

$$\text{iv) Net Operating Cash Flow Ratio} = \frac{0.18 + (0.04) + 0.22 + 0.14 + 0.15}{5} = 0.13 \text{ times}$$

### AVERAGE PROFITABILITY RATIOS

$$\text{i) Net Profit Margin} = \frac{19.20\% + 20.89\% + 25.99\% + 24.58\% + 24.20\%}{5} = 22.98\%$$

$$\text{ii) Return on Equity} = \frac{19.56\% + 23.38\% + 28.81\% + 26.94\% + 27.56\%}{5} = 25.25\%$$

$$\text{iii) Return on Asset} = \frac{2.72\% + 3.19\% + 4.35\% + 4.21\% + 4.17\%}{5} = 3.37\%$$

$$\text{iv) Net Asset Turnover} = \frac{0.14 + 0.15 + 0.17 + 0.17 + 0.17}{5} = 0.16 \text{ times}$$



### **Appendix iii**

#### **INTERVIEW GUIDE**

1. Name of interviewee.
2. How do you ensure that the bank is liquid?
3. How do you ensure that the bank is profitable?
4. Why did CAL experience negative net operating cash flow ratio in 2006?
5. Why did SG-SSB experience negative net operating cash flow ratio in 2005?
6. What are the banks areas of investment with the aim of generating cash to support liquidity when the need arises?



# KNUST School of Business

COLLEGE OF ART & SOCIAL SCIENCES  
KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY



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KSB/SA/Vol. 1

June 15, 2009

The Human Resource Manager  
Standard Chartered Bank Ghana Ltd.  
Kumasi

Dear Sir / Madam,

## LETTER OF INTRODUCTION

I hereby introduce the bearer, Joseph Sarpong Konadu as a Master of Business Administration (MBA) student from KNUST School of Business (KSB), Kumasi.

As part of KNUST School of Business' curriculum, students offering Postgraduate courses are supposed to undertake research.

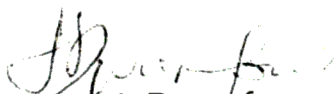
Joseph Sarpong Konadu has chosen to undertake this research in your esteemed organization on **"the Impact of Liquidity on Profitability: A case study of Banks listed on the Ghana Stock Exchange"**.

I would be grateful if you would accord him the necessary support.

I count on your usual co-operation.

Thank you.

Yours faithfully,

  
Joseph Dwumfour  
Prin. Admi. Asst.

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