BANK DEPOSITS AND LIABILITY MANAGEMENT AND BANK PERFORMANCE: A CASE STUDY OF LISTED BANKS

BY

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I similarly extend my deep gratitude to my family for their immense support, encouragement, guidance and prayers.
DEDICATION

This work is dedicated to my dear parents Rev Emmanuel Fianko and Mrs Veronica Fianko who has invested their time, talent and treasure in my life to bring me this far.
ABSTRACT

The purpose of this research of this paper was to find the bank deposit on the performance of the listed banks on the Ghana Stock Exchange for a five year period from 2005 – 2009. Using a multiple regression analysis, a correlation analysis was first estimated to test for the presence of multi collinearity among the independent variables. The study found debt, size, deposits, equity and the type of bank ownership as significant indicators that contribute to the performance of the listed banks measured as the returns on equity and returns on assets of listed banks on the Ghana Stock Exchange.
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CHAPTER ONE

1.0 Introduction

This chapter outlines the motivation for this thesis. It provides some background information on in banking efficiency. The chapter also outlines my motivation for the study, the research problem and the key research objectives. There is also a brief delineation of the research methodology and a chapter outline.

1.1 Background

A strand of the theoretical capital structure literature suggests that firm financing decisions are influenced not only by conflicts amongst agents inside the firm, but also by the actions of parties outside of the firm’s boundaries: industry rivals and consumers, Benoit (1984), Titman (1984), Brander and Lewis (1986, 1988). Most of the empirical research on this topic has revolved around the hypothesis that certain financial policies – in particular, the use of debt financing – may either boost or hinder firm performance. The widespread use of this approach is unsurprising given that the theoretical literature is often thought to imply some sort of monotonic relation between debt taking and performance, Bolton and Scharfstein (1990), Maksimovic and Titman (1991).

There are various theories on the importance of debt financing. The trade off theory (Myers, 1977), argues that a company’s capital structure is the result of the trade off between debt and non-debt tax shields and bankruptcy cost. The agency theory (Jensen and Meckling, 1976) holds
that debt helps eliminate the conflict between stockholders and the management and reduce the management’s disposal of free cash flow; the information asymmetry theory (Myers and Majluf, 1984) maintains that the management can use a company’s capital structure to send a signal - a high asset/liability ratio often represents a company’s high quality in the eyes of investors. The control rights theory (Aghion and Bolton, 1992) assumes that the financing structure influences the result of mergers and acquisitions (M&A’s) by affecting the distribution of voting rights and price of M&As. The study by Lu and Xin(1998) and Yao and Wu(2007) reveals that there is a significant difference between different industries in capital structure, representing that industry factors must be controlled in analyzing influential factors of debt financing.

Several reasons typically are given for using debt. First, issuing new stock to meet financing needs can be costly, diluting the future earnings of the existing shareholders. It may also reduce management’s control. Given the conventional wisdom that firms should finance first with a combination of retained earnings and debt, and only under certain conditions with newly-issued equity, equity financing may send a negative signal to the market.

Second, the tax-deductibility of the interest paid on debt increases cash flow and makes debt a valuable financing tool. However, at some point debt will reach a level where the costs associated with financial distress will outweigh the tax benefits and adding more debt will decrease firm value. Financial distress includes all of the costs (both direct and indirect) associated with debt, up to, and including, bankruptcy. Unfortunately, the costs of financial distress are difficult to measure, so the optimal level of debt is difficult to determine.
Together all of the generally accepted theories would argue that the financial manager, whose primary goal is to increase shareholder wealth, would want to keep debt as a part of the capital structure. This research seeks to examine the relationship between debts on the books of listed banks on the Ghana Stock Exchange and their financial performance.

While the literature examining the performance implications of capital structure choices is immense in developed markets (e.g. USA and Europe), little is empirically known about such implications in emerging or transition economies such as Ghana. In such a country as Eldomiaty (2007) argued capital market is less efficient and incomplete and suffers from higher level of information asymmetry than capital markets in developed countries. Studies by Abor (2007) and Ebaid (2009) on the impact of capital structure on firm performance focused on SME’s and non-financial industries respectively in Ghana and South Africa and Egypt. It is, therefore, necessary to examine the validity of the impact debt structure on a bank’s performance in Ghana as an example of emerging economy, with a focus on financial institutions largely missing from this body of literature, especially banks and it is this gap that this study seeks to fill.

1.2 Research problem

The use of debt by corporations has grown dramatically in the past 15 years. The ratio of debt to equity financing was approximately two to one in 1982 in the US, but increased to five to one by 1993. Firms have also increased their level of debt relative to their profits. As a result, firm debt in general has risen substantially, although the levels of debt between individual firms vary significantly.
It has long been argued that “judicious” use of debt increases firm value and, therefore, shareholder wealth. The widely accepted view of capital structure is that there exists some optimal range of debt levels that maximizes shareholder wealth. However, a recent study by the authors does not support this view, with results suggesting that, within a large sample of firms over an extended period of time, firms with a lower percentage of debt have higher value. This implies that firms, in this case banks should re evaluate their use of deposit liability.

1.3 Research Objectives

The aim of this study is to examine the relationship between bank deposits debt and firm performance of listed banks on the Ghana Stock Exchange.

The specific objective of the study is the following:

- Examining the impact of bank deposit liability on performance.

1.4 Rationale for the Study

This study contributes to literature on financial performance in several forms. First, the results of this research will contribute to improve the understanding of corporate debt on firm performance in the context of a developing country, influencing their future debt policies with specific reference to financial institutions. Second, investors will find this research very useful to arrange an investment strategy. Third, provide rational for regulators to review rise in debt use.

1.5 Scope and Limitation of Study

This research attempts to examine the relationship between debt and firm performance of eight listed banks on the Ghana Stock Exchange. The generalization of research findings from this
study may be limited by several factors such as the number and uniformity of the samples used for the study. The sample constitutes merely eight banks out of the 27 banks in Ghana, making a total of forty observations. This small number of sample, for instance, limits the detail analyses of the data.

1.6 Organization of Study

The study is structured into five chapters. The first chapter gives an introductory overview of the study. It considers the background to the study, the research problem, the research objective, rationale for the study, the scope and limitation as well as the organisation of the study.

Chapter two reviews existing knowledge and literature of the study. This includes materials from journals, magazines, financial reports of companies, and the Internet amongst others. Chapter three explains the research methodology and the estimation method to be used to analyze the data. Chapter four deals with the analysis of the data collected and the discussion of the findings. Finally, chapter five weaves the discussion together into a conclusion based on findings drawn from the study.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses the both the theoretical and empirical literature on the relationship between debt and firm’s financial performance. The concept of debt financing is explained, evidence of theories of debt and firm performance thoroughly discussed.

2.2 Debt Financing Defined

Debt financing is basically money that you borrow to run your business. Debt financing can being divided into two categories, long term debt financing and short term debt financing. Debt is borrowing money from an outside source with the promise to return the principal, in addition to an agreed-upon level of interest. Although the term tends to have a negative connotation, start up companies often turn to debt to finance their operations. In fact, even the healthiest of corporate balance sheets will include some level of debt. In finance, debt is also referred to as “leverage.” The most popular source for debt financing is the bank, but debt can also be issued by a private company.

2.2.1 Long Term Debt Financing

Long Term Debt financing usually applies to assets your business is purchasing, such as equipment, buildings, land, or machinery. With long term debt financing, the scheduled repayment of the loan and the estimated useful life of the assets extends over more than one year.
2.2.2 Short Term Debt Financing

Short Term Debt financing usually applies to money needed for the day-to-day operations of the business, such as purchasing inventory, supplies, or paying the wages of employees. Short term financing is referred to as an operating loan or short term loan because scheduled repayment takes place in less than one year. A line of credit is an example of short term debt financing.

2.2.3 Liability Structure of Ghanaians Banks

Total deposits accounted for 69.9 percent of total liabilities at the end of June 2011 compared with 68.1 percent recorded in 2010. However, the proportion of shareholders’ funds in total liabilities remained the same at 13.4 percent in June 2011. This suggested that 13.4 percent of the banking sector assets were backed by equity. The share of total borrowings in total liabilities declined marginally to 9.6 percent as at June 2011 from 9.9 percent registered in June 2010.

Table 1: Composition of Banks Liabilities (year ending June, 30th)

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Deposits</td>
<td>66.3</td>
<td>63.7</td>
<td>64.4</td>
<td>66.2</td>
<td>68.1</td>
<td>69.9</td>
</tr>
<tr>
<td>Total Borrowing</td>
<td>9.4</td>
<td>14.8</td>
<td>12.5</td>
<td>12.9</td>
<td>9.9</td>
<td>9.6</td>
</tr>
<tr>
<td>Other Liabilities</td>
<td>11.2</td>
<td>10.7</td>
<td>11.5</td>
<td>9.4</td>
<td>8.2</td>
<td>7</td>
</tr>
<tr>
<td>Shareholders Fund</td>
<td>12.1</td>
<td>10.3</td>
<td>10.8</td>
<td>10.8</td>
<td>13.4</td>
<td>13.4</td>
</tr>
</tbody>
</table>
2.3 Bank Deposits

Bank deposits remain the largest source of liabilities for banks, and as shown in Table 1, over 60% total liabilities of Ghanaian banks for 2011 was made up of deposits. Below are the various forms through which banks accept deposits from its customers;

- Checking accounts: A deposit account held at a bank or other financial institution, for the purpose of securely and quickly providing frequent access to funds on demand, through a variety of different channels. Because money is available on demand these accounts are also referred to as demand accounts or demand deposit accounts.

- Savings accounts: Accounts maintained by retail banks that pay interest but can not be used directly as money (for example, by writing a cheque). Although not as convenient to use as checking accounts, these accounts let customers keep liquid assets while still earning a monetary return.

- Money market account: A deposit account with a relatively high rate of interest, and short notice (or no notice) required for withdrawals. In the United States, it is a style of instant access deposit subject to federal savings account regulations, such as a monthly transaction limit.

- Time deposit: A money deposit at a banking institution that cannot be withdrawn for a preset fixed 'term' or period of time. When the term is over it can be withdrawn or it can be rolled over for another term. Generally speaking, the longer the term the better the yield on the money.
2.3.1 Advantages to Debt Financing

- Maintain ownership: When you borrow from the bank or another lender, you are obligated to make the agreed-upon payments on time. But that is the end of your obligation to the lender. You can choose to run your business however you choose without outside interference.

- Tax deductions: This is a huge attraction for debt financing. In most cases, the principal and interest payments on a business loan are classified as business expenses, and thus can be deducted from your business income taxes. It helps to think of the government as a “partner” in your business, with a 30 percent ownership stake (or whatever your business tax rate is). If you can cut the government out of the equation, then it’s beneficial to your business.

- Lower interest rate: Furthermore, you should analyze the impact of tax deductions on the bank interest rate. If the bank is charging you 10 percent for your loan, and the government taxes you at 30 percent, then there is an advantage to taking a loan you can deduct. Take 10 percent and multiply it by (1-tax rate), in this case it’s: 10 percent times (1-30 percent), which equals 7 percent. After your tax deductions, you’ll be paying the equivalent of a 7 percent interest rate.
2.3.2 Drawbacks to Debt Financing

- Repayment: As mentioned above, your sole obligation to the lender is to make your payments. Unfortunately even if your business fails, you will still have to make these payments. And if you are forced into bankruptcy, your lenders will have claim to repayment before any equity investors.

- High rates: Even after calculating the discounted interest rate from your tax deductions, as explained above, you may still be faced with a high interest rate. Interest rates will vary with macroeconomic conditions, your history with the banks, your business credit rating and your personal credit history.

- Impacts your credit rating: It might seem attractive to keep bringing on debt when your firm needs money, a practice knowing as “levering up,” but each loan will be noted on your credit rating. And the more you borrow, the higher the risk to the lender, and the higher interest rate you’ll pay.

- Cash and collateral: Even if you plan to use the loan to invest in an important asset, you’ll need to make sure your business will be generating sufficient cash flows by the time loan repayment starts. Also you’ll likely be asked to put up collateral on the loan in case you default on your payments.

2.3.3 Alternatives to Debt Financing

- Equity financing: This involves selling shares of your company to interested investors, or putting your own money into the company.
• Mezzanine financing: Lenders who set up this debt tool offer the business unsecured debt (no collateral is required). The trade-off is a high interest rate, in the 20-30 percent range. Plus there’s a catch. The lender has the right to convert the debt into equity in the company if the company defaults on payments. Despite the high interest rate, mezzanine financing appeals to entrepreneurs because it offers quick liquidity, and even though it can be converted to equity, the issuing bank usually does not want to be an equity holder, meaning they’re not looking to control the company.

• Hybrid financing: Most likely you’ll turn to a combination of debt and equity financing to fund your venture. The question then becomes: What is the proper combination? When deciding optimal capital structure, a common finance theory is the Modigliani-Miller theorem, which states that in a perfect market, without taxes, the value of a firm is the same whether it is financed completely by debt or equity or a hybrid. This, however, is considered too theoretical since real companies do have to pay taxes, and there are costs associated with bankruptcy. There are several other theories and formulas on determining optimal capital structures.

2.4 Theories of Debt Financing

2.4.1 Trade off theory (Myers, 1977)

The trade-off models have dominated the capital structure literature. The tax benefit-bankruptcy cost trade-off models (DeAngelo and Masulis (1980)) predict that firms will seek to maintain an optimal capital structure by balancing the benefits and the costs of debt. The benefits include the tax shield whereas the costs include expected financial distress costs. The theory predicts that firms maintain an optimum capital structure where the marginal benefit of debt equals the marginal cost. The implication of these trade-off models is that firms have target leverage and
they adjust their leverage toward the target over time. Myers (1984) suggests that the adverse selection costs overwhelm the forces that determine the optimal leverage in the trade-off theory. In addition to the internal fund deficit (surplus) other factors such as the deviation from the target leverage (industry median), marginal tax rates, net loss carry forward, financial distress and non-debt tax shields sources may affect the proportion of debt financing (reduction). If the proportion of debt financing (reduction) is chosen to minimize the deviation from target leverage, we expect to find that the firms’ deviation from the target leverage has a significant impact on the proportion of debt financing (reduction). In addition, the trade-off theory predicts that firms below the target are most likely to use more debt financing and firms above the target to use less debt financing. The trade-off theory predicts that firms with high marginal tax rate have greater incentive to issue debt due to the tax-deductibility of interest payments. DeAngelo and Masulis (1980) argue that non-debt tax shields, depreciation and investment tax credit (NDTS), can substitute for the interest deductibility. MacKie-Mason (1990) argues that non-debt tax shields do not always crowd out interest deductibility. Specifically, profitable firms could have large non-debt tax shields, high marginal tax rate, and issue more debt. Highly distressed firms, close to tax exhaustion, are most likely to avoid debt financing since non-debt tax shields crowd out the associated debt tax shields. Thus, DeAngelo and Masulis (1980) model predicts that the relation between the debt financing and the non-debt tax shields is negative, whereas MacKie-Mason (1990) argument indicates that this relation is positive for profitable firms and negative for highly distressed firms. On the other hand, the ability of the firms to carry forward their net operating losses can affect the amount of debt financing. Firms that have a net loss carry forward have a disincentive to use more debt financing as proportion of their deficit relative to firms that do not experience a loss. The trade-off theory predicts that firms’ profitability, tangible
assets, size, financing deficit size and the distance from the target leverage are positively related to the rate of adjustment for firms that adjust from below. At the same time, non-debt tax shields, expected bankruptcy cost, growth options, financing surplus size and the net loss carry forward are negatively related to the rate of adjustment for this group of firms. Accordingly, firms’ profitability, tangible assets, size, and financing deficit size are negatively related to the rate of adjustment for firms that adjust from above, whereas non-debt tax shields, expected bankruptcy cost, growth options, financing surplus size and the net loss carry forward are positively related to the rate of adjustment for this group of firms.

The trade-off theory of financial leverage in corporate finance posits that the optimal capital structure is achieved when the marginal tax benefit of debt equals the marginal cost of financial distress. The theory indicates that corporations can increase firm value by levering up to a certain point, and thus we should observe moderate use of debt by corporations. However, the reality is not completely consistent with the theory about corporate behavior. In the U.S. a significant number of firms are deliberately avoiding any debt, either short-term or long-term, in their capital structure.

2.4.2 The agency theory (Jensen and Meckling, 1976)

The separation of ownership from control is one of the basic tenets of a free-market society because it allows specialization, Lambert (2001). Agency problems arise in firms because corporate decisions are made by managers (agents) on behalf of the firm’s capital suppliers (principals). In most agency models, the sequence of events starts with the principal choosing the agent’s compensation system, which depends on the performance measures that the principal specifies as well as the final outcome.
Agency theory suggests that using stock grants and options as a part of executive compensation helps to align the interests of firm shareholders with executives. However, it is unclear how executive compensation, especially the use of stock grants and options, affects firm investment and financing decisions. Executive compensation may affect the executives' exposure to firm risk, and hence affect investment behavior of the firm, as well as the financing structure behind the investment decisions. A better understanding of how executive compensation affects firm investment and financing decisions allows boards of directors to design policies that mitigate agency problems between shareholders and executives, and provide a more comprehensive understanding of a matching or mismatching of firm investment strategies and capital structure.

Under the agency theoretical models (Jensen and Meckling (1976), Myers (1977) and Jensen (1986)) firms use the benefits of reducing potential free cash flow problems and other potential conflicts between managers and shareholders, to offset costs associated with underinvestment and asset substitution problems.

Empirical findings are generally consistent with this rationale. May (1995) shows how a manager's decision-making is affected by personal risks and finds that CEOs who have more personal wealth associated with firm equity tend to take less risks and diversify. Coles et al (2006) provides evidence of the relationship between managerial compensation structures and firm investment and debt policies, and find that if the CEO's wealth has a higher sensitivity to the firm's stock volatility, then these firms will take on riskier policies, such as investing more in R&D, are more focused, and take on higher leverage. Brisley (2006) finds that the stock options exercise schedules of executives affect risk-taking incentives and propose a progressive performance vesting" strategy of options to allow the firm to more efficiently rebalance riskin-
taking incentives for managers. Gibbons and Murphy (2005) find that investment on research, development and advertising are all affected during the final years of a CEO's time in office. Aggarwal and Samwick (2003) find that managers diversify the firm’s investment portfolio because of private benefits they can obtain from diversification. All literature review findings imply that due to principal-agent problems, firm risk taking behaviors are affected by executives' personal interests and compensation structure.

In addition to firm risk taking, related research studies show that other firm level activities, such as firm performance and firm debt structure, are also affected by managerial compensation schemes. Mehran (1995) finds firms whose executives have more equity-based compensation perform better. Findings also suggest the form of executive compensation plays an important role in motivating managers to increase firm value. Ortiz-Molina (2007) examines how executive compensation is related to capital structure and finds pay-performance sensitivity responds differently to varying debt levels, hence as leverage ratio changes, pay-performance sensitivity changes. The findings suggest capital structure and executive compensation are related. One possible explanation for this correlation is agency problems between executives and shareholders are connected to agency problems between debt-holders and equity shareholders. Studies based on this reasoning include Brockman, Martin and Unlu (2010), whose research shows a negative relation between the sensitivity of a CEO's personal investment portfolio to changes in firm stock price and shorter-maturity debt; but a positive relation between sensitivity of a CEO's portfolio to stock price volatility and shorter term debt. Other studies about executive pay and firm debt structures include Chava and
Purnanandam (2007). The authors find a CFO's incentives have strong influences on floating-to-fixed rate debt structure of firm. If CFOs have incentives to increase firm risk, firms adopt a volatility-increasing debt structure, which means more floating-rate debt. In the context of REITs, Ertugrul et al (2008) find CEO's compensation structure affects derivative usage of REITs, the higher the ratio of CEO cash compensation to total compensation, the less hedging activity.

2.4.3 The Pecking Order Theory (Myers and Majluf, 1984)

The pecking order hypothesis, posited by Myers (1984) and Myers and Majluf (1984), predicts that information asymmetry between managers and investors creates a preference ranking over financing sources. Beginning with internal funds, followed by debt, and then equity firm’s work their way up the pecking order to finance investment in an effort to minimize adverse selection costs. While often thought of as a consequence of adverse selection, pecking order behavior can also be generated by other economic forces including agency costs (Myers (2003)) and taxes (Stiglitz (1973) and Hennessy and Whited (2005)).

The pecking order of theory, expounded on by Lucas and McDonald (1990) is based on the idea that managers know more about the true value of the firm and the firm’s riskiness than less informed outside investors. To avoid the underinvestment problem, managers will seek to finance the new project using a security that is not undervalued by the market, such as internal funds or riskless debt. Therefore, this affects the choice between internal and external financing. The pecking order theory is able to explain why firms tend to depend on internal sources of funds and prefer debt to equity if external financing is required. Thus, a firm’s leverage is not
driven by the trade-off theory, but it is simply the cumulative results of the firm’s attempts to mitigate information asymmetry.

The main prediction of the pecking order theory is that firms with high information asymmetry rely more on issuing debt to finance their external financing needs, given that the financial distress cost is low. Short-term debt, which is less sensitive to the information asymmetry problem relative to long-term debt (Flannery (1986)), should constitute a higher proportion of the debt financing if the information asymmetry is uniformly distributed over time. Under such assumption, we expect to find a higher impact of information asymmetry on the proportion of short-term debt financing predicting that the coefficient on the Information variable to be positive for the financing deficit group and that firms do not have a well-defined target leverage. The theory further posits that debt typically grows when investment exceeds internal funds and falls when investment is less than internal funds. Therefore, the managers’ problem in each period is to decide which changes they will make in each financing resources, given the size of their financing deficit (surplus) and the market conditions.

Empirical evidence on the pecking order is diverse and large. Helwege and Liang (1996) focused specifically on testing the pecking order hypothesis and examined a small sample of IPO firms and show that issuance decisions appear to be only weakly related to the size of the financing deficit, leading them to reject the pecking order hypothesis. Shyam-Sunder and Myers (1999) show that a significantly large fraction of firms' financing deficits are filled with debt. This leads them to conclude that the pecking order offers an excellent first-order descriptor of corporate financing behaviour.
Frank and Goyal (2003) show that the Shyam-Sunder and Myers' results weaken significantly when one expands the sample to include smaller firms and more recent data. While bringing to light the importance of equity financing during the 1990s and among smaller firms, Frank and Goyal rely on, to a certain extent, the empirical test of Shyam-Sunder and Myers in drawing their inferences concerning the pecking order. However, Chirinko and Singha (2000) identify power problems with this testing approach that can result in both false positives and negatives. Additionally, Lemmon and Zender (2004) suggest that the increased equity activity found by Frank and Goyal is due to debt capacity concerns or, specifically, concerns that issuing debt today may result in either debt overhang problems (Myers (1977)) or large increases in the likelihood of financial distress.

2.5 Empirical Literature on Financial Performance of Banks

Many researchers have sought to measure performance of firms using variables such as return on assets or return on equity. There is no doubt that performance of firms is important because it is out of a good performing firm that shareholders get their returns. Banks are also not spared of this performance assertion. There are lots of ways of assessing bank performance. Recent research investigates the relationship between loan quality and the efficiency of financial institutions. Miller and Noulas (1997) identify that asset and liability management and the quality of assets affect performance. Larger banks experience poor performance due to the declining quality of their loan portfolio (Miller & Noulas 1997).
Das and Ghosh (2006) examined the association of capital adequacy, asset quality and profitability with banks efficiency. They posit that Banks reporting higher profitability attract customers, create more deposits, lending and are efficient in intermediation. They also found a close relationship between bank efficiency and the financial soundness of a bank. Further, technically more efficient banks maintain on average, less non-performing loans.

Following the concluding part of Dash and Ghosh, (1996) on non-performing loans, Berger and Young (1997) suggest that the relationship between loan quality and cost efficiency can be accessed from two sides. According to their study, increases in non-performing loans tend to be followed by decreases in measured cost efficiency. Further, there is evidence that decreases in the capital ratio generally increase nonperforming loans and substantially affect the efficiency of a bank (Berger and Young 1997). Studies have also emphasised that portfolio risk has a positive relationship with efficiency. A large number of problem loans, low capital and a weak liquidity position are directly related to the quality of the portfolio and, eventually affect the efficiency of an institution (Eisenbeis et al, 1999).

Berger (1995) examined the relationship between the return on equity and the capital asset ratio for a sample of US banks for the period 1983-1992. Using the Granger causality model, he shows that the return of equity and capital to asset ratio tend to be positively related.

Bashir (2000) studied the determinants of Islamic bank’s performance across eight Middle Eastern countries for six years that is from 1993 to 1998. A number of internal and external factor were used to predict profitability and efficiencies. Controlling for macroeconomic environment, financial market situation and taxation, the results show that higher leverage and large loans to asset ratios, lead to higher profitability. The paper also reports that foreign-owned
banks are more profitable than the domestic one. There is also evidence that taxation impacts negatively bank profitability. Finally, macroeconomic setting and stock market development have a positive impact on profitability.

In their paper on the determinants of bank interest margins and profitability, Abreu and Mendes (2002), looking at some European countries, reported that well capitalized banks face lower expected bankruptcy costs and this advantage translates into better profitability. Although with a negative sign in all regressions, the unemployment rate is relevant in explaining bank profitability. The inflation rate is also relevant.

2.6 Conclusion of Literature review

Strebulaev and Yang (2006) conclude that higher market-to-book ratios of unlevered firms relative to peer firms can lead managers to believe that their equity is overvalued by the market, which would induce them to issue equity rather than debt. In the long-run, they claim, as sentiment between insiders and the market reverts to par, the market realizes that the misevaluation of debt-free firms should be corrected, resulting in relatively poor stock performance.

Contrary to Strebulaev and Yang (2006), debt-free firms tend to perform better over the long run based on calendar-time portfolio regressions after adjusting for Fama-French and Carhart factors (Fama and French, 1993; Carhart, 1997).
In a study by Ebaid (2009) to empirically investigate the impact of capital structure choice on firm performance in Egypt as one of emerging or transition economies using a sample of 64 firms covering ten of non-financial industries from 1997 to 2005. Using the ratios of short term debt to total assets; long term debt to total assets; and total term debt to total assets as measures of financial leverage, and size as a control variable, with return on assets and return on equity as measures of performance, the multiple regression results reveal that capital structure choice decision, in general terms, has a weak-to-no impact on firm’s performance.

Abor (2007) examined the effect of debt policy (capital structure) on the financial performance of small and medium-sized enterprises (SMEs) in Ghana and South Africa. Employing a panel data analysis to investigate the relations between measures of capital structure and financial performance, using various measures of performance, the results of this study indicate that capital structure influences financial performance, although not exclusively.

Prior studies on African counties have shown a weak relationship between capital structure and firm performance but largely missing from this body of literature is the focus on financial institutions, especially banks and it is this gap that the study seeks to fill.
CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter details the data analysis process of the study. The elements making up this chapter includes the research data and sample, variables description and econometric model.

3.1 The Research Data and Analysis

Samples are listed banks on the Ghana Stock Exchange with period of analysis from 2005 until 2009. A pooled time series cross-section analysis was employed in the analysis of the data. A panel study permit to inquiry into “variables” that elude study in simple cross-sectional or time-series as well as capture not only the variation of what emerges through time or space, but the variation of these two dimensions simultaneously. This is because, instead of testing a cross-section model for all countries at one point in time or testing a time series model for one country using time series data, a pooled model is tested for all countries through time (Pennings, Kemane, Kleinnijenhuis 1999). This research will explore several statistical test such as multiple linear regressions and Wald test. All statistical tests based on classical statistic assumptions pre-requirement.

3.2 Variables

- Debt

This research defines debt as the sum of long-term and short-term borrowings in deposits debt as a ratio of total asset. This excludes non-financial liabilities, such as accounts payable, provisions for pensions, deferred taxes, and other provisions for future liabilities.
Returns on Equity and Assets

This research uses return on equity as financial performance proxy. Return on equity is a performance indicator that more on the shareholders side. Shareholders concern on their investment on the firm, which is represent by the return on equity. The equation for return on equity is:

\[
ROE = \frac{EAT}{Equity} \quad \text{and} \quad ROA = \frac{EAT}{Total \ Assets}
\]

Where

EAT = EarningsafterTax
Equity = BookvalueofEquity
Total Assets = Book value of banks assets

3.3 Control Variables

This research made use of the following control variables:

- **Firm Size**

This is measured by the logarithm of the corporation’s total assets, In(TA). Rajan and Zingales (1995) argue that size could proxy for the probability of default, which is higher for smaller firms. On the other hand, larger, more visible firms suffer less from informational asymmetry, have easier access to equity markets and, therefore, should be less levered, and higher financial performance. Mixed evidence is provided by Hoshi,

- **Deposits**
  Deposits serve as the main source of funds for bank intermediation activities. The profitability of banks thus depends on how banks are able to obtain low cost funds for from their depositors for creation of their loan assets.

- **Liquidity**
  Banks require liquidity to be meeting the claims made their depositors in the form of liquid assets. Holding liquid assets may deny banks the opportunity to earn income by investing more profitable progress, therefore how banks are able to manage their liquid assets to ensure they don’t excessive liquid assets and the same time having enough liquidity to meet depositors request can affect their profitability.

- **Loans and Advances**
  Forming a larger portion of banks’ asset portfolio, this serves as the major source of income from the interest they earn on making loans and advances. Therefore, as banks make more loans, it is the expectation that their interest revenue will increase, hence profitability.

- **Bank type**
  This represents the type of ownership of a bank, whether foreign or domestic banks. A bank is classified as a foreign bank if more than 50% ownership of that bank is controlled by non-Ghanaians whereas domestic banks are those of over 50% ownership by Ghanaians.
3.4 Empirical Model

This dependent variables (financial performance) are returns on assets and equity with the independent and control variables made up of debt, Firm’s Size, loans, liquidity ratio, deposits ratio, impaired loans ratio and bank type. The variables were based on the literature reviewed which included Rivard and Thomas (1997) and Abor (2007).

\[ y_{i,t} = \alpha + \beta_1 \text{DEBR}_{i,t} + \beta_2 \text{LIQ}_{i,t} + \beta_3 \text{SIZE}_{i,t} + \beta_4 \text{LOTA}_{i,t} + \beta_5 \text{DEPR}_{i,t} + \beta_6 \text{EQR}_{i,t} + \beta_7 \text{BKTYP}_{i,t} + \epsilon_{i,t} \]

\( y_{i,t} \) = Returns on equity and returns on asset for bank \( i \) in period \( t \) as measures of profitability

\( \text{DEBR}_{i,t} \) = Sum of long term and total deposits financial debt divide by total asset for bank \( i \) in period \( t \).

\( \text{EQR}_{i,t} \) = Equity to Total Assets for bank \( i \) in period \( t \)

\( \text{LIQ}_{i,t} \) = the ratio liquid assets to total assets for bank \( i \) in period \( t \)

\( \text{LOTA}_{i,t} \) = the ratio of loans to total assets for bank \( i \) in period \( t \)

\( \text{DEPR}_{i,t} \) = the ratio deposits to total assets for bank \( i \) in period \( t \)

\( \text{BKTYP}_{i,t} \) = a dummy variable for type of bank ownership, 1=foreign ownership and 0=domestic ownership.

\( \text{Size}_{i,t} \) = Log of Total Assets for bank \( i \) in period \( t \)

\( \epsilon_{i,t} \) = the disturbance term for bank \( i \) in period \( t \)

Estimating the model with fixed effects is a consequent strategy for two reasons. First of all, we discriminate between random and fixed effects by defining the target of inference (Wooldridge, 2002). A random effects model is more appropiate if the interest of inference relates to a population mean, i.e. units are viewed as sampled from an overall population. In contrast, fixed
effects are more suitable if the data at hand is not sampled but almost covers the full population as it is the case for a comprehensive sample of all Ghanaian banks. Second, from an econometric point of view, the issue of correlated errors is the key driver in discriminating between fixed and random effect models. The random effect assumption is that the individual specific effect is uncorrelated with the independent variables whereas the fixed effect assumes correlation between the individual effect and the exogenous measures.
CHAPTER FOUR

ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter deals with the analysis and discussion of the results of the study. The analysis is based on the model as specified in chapter three of the study. Section 4.2 presents the descriptive statistics on the variables used in the analysis of bank performance as presented in chapter three of the study as well correlation analysis to test for multicollinearity among the independent variables. Then in section 4.3, the regression results of the study are presented. This looks at which of the variables are significant in predicting bank performance using return on equity (ROE) as a dependent variable. Again, tables supporting the analysis will be presented.

4.2 Descriptive Statistics of variables

Details of information on the mean of variables, the standard deviation of variables, and the maximum and minimum number of variables as reported by the data as well the description on observation for the analysis of the dependent and independent variables over the sample period 2005 to 2009 is presented in Table 2 below. This research uses pooling data with 35 firm-year observations.

The mean returns on asset and returns on equity for all the banks on the exchange in the assessment of performance are 3.11% and 26.62% respectively. This means that average the banks earn a return of 26.62% on the use of shareholders funds. Debts to assets ratio yielded a mean of close to 88.08%. The means for the other independent variables is equity to assets of
11.90%, liquidity ratio of 12.99%, deposit ratio of 66.07%, loans to assets ratio of 51.46%. The mean of firm size as represented by the log of total assets is 19.70%.

Table 2:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE overall</td>
<td>0.266231</td>
<td>0.12157</td>
<td>0.0741</td>
<td>0.6139</td>
<td>N = 35</td>
</tr>
<tr>
<td>ROE between</td>
<td>0.110983</td>
<td>0.14426</td>
<td>0.14426</td>
<td>0.41142</td>
<td>n = 7</td>
</tr>
<tr>
<td>ROE within</td>
<td>0.062539</td>
<td>0.120011</td>
<td>0.120011</td>
<td>0.468711</td>
<td>T = 5</td>
</tr>
<tr>
<td>ROA overall</td>
<td>0.031129</td>
<td>0.011588</td>
<td>0.009807</td>
<td>0.057567</td>
<td>N = 35</td>
</tr>
<tr>
<td>ROA between</td>
<td>0.010883</td>
<td>0.014923</td>
<td>0.014923</td>
<td>0.046138</td>
<td>n = 7</td>
</tr>
<tr>
<td>ROA within</td>
<td>0.005457</td>
<td>0.017142</td>
<td>0.017142</td>
<td>0.042559</td>
<td>T = 5</td>
</tr>
<tr>
<td>DEBT overall</td>
<td>0.66069</td>
<td>0.128359</td>
<td>0.282454</td>
<td>0.815895</td>
<td>N = 35</td>
</tr>
<tr>
<td>DEBT between</td>
<td>0.121435</td>
<td>0.446933</td>
<td>0.446933</td>
<td>0.777345</td>
<td>n = 7</td>
</tr>
<tr>
<td>DEBT within</td>
<td>0.058861</td>
<td>0.496211</td>
<td>0.496211</td>
<td>0.750356</td>
<td>T = 5</td>
</tr>
<tr>
<td>LIQUIDITY overall</td>
<td>0.211968</td>
<td>0.160431</td>
<td>0.001497</td>
<td>0.550873</td>
<td>N = 35</td>
</tr>
<tr>
<td>LIQUIDITY between</td>
<td>0.154055</td>
<td>0.002357</td>
<td>0.002357</td>
<td>0.464619</td>
<td>n = 7</td>
</tr>
<tr>
<td>LIQUIDITY within</td>
<td>0.069262</td>
<td>0.094916</td>
<td>0.094916</td>
<td>0.430822</td>
<td>T = 5</td>
</tr>
<tr>
<td>EQUITY overall</td>
<td>0.118979</td>
<td>0.03281</td>
<td>0.014821</td>
<td>0.190526</td>
<td>N = 35</td>
</tr>
<tr>
<td>EQUITY between</td>
<td>0.023995</td>
<td>0.078001</td>
<td>0.078001</td>
<td>0.153041</td>
<td>n = 7</td>
</tr>
<tr>
<td>EQUITY within</td>
<td>0.023843</td>
<td>0.055799</td>
<td>0.055799</td>
<td>0.168449</td>
<td>T = 5</td>
</tr>
</tbody>
</table>
The “within” effects represent the variability of a particular score for banks in the sample, which is a measure of how much a bank in the sample tends to change (or vary) over time for the variables. In other words, it is the average of the average change of scores banks in the sample.

The “between” effects, by contrast, don't examine scores of individual banks, but instead examine differences between individual banks.

4.3 Correlation Analysis

In order to examine the possible degree of multi-collinearity among the repressors’, correlation matrixes of the variables is presented in Table 3. With respect to the sample, the debt ratio has positive correlations with deposits and size but has negative correlations with liquidity, equity and loans. Deposits, another variable of interest also exhibits positive correlations debt, size and loans while showing a negative relationship with liquidity and equity.
However the relationships the regressor are weak and thus indicates the absence of multi-collinearity among the regressor. For a stronger relationships among the regressor, a correlation coefficient of 0.5 (50 percent) should be established between two regressor. The relationship between debt and liquidity gives a coefficient of -0.1804, which indicates that a unit increase in the debt ratio reduces liquidity ratio by 0.1804 (18.04%), 0.2373 coefficients for debt and size and 0.1002 for debt and deposits, implying a that upwards movements in debt ratio results a upward movements in deposits mobilization, hence lager bank sizes.

With coefficients of -0.3706 for debt and equity and -0.2406 for debt ratio and loans, any upwards movements in the ratio of debt to equity lead to opposite movements in loans.

<table>
<thead>
<tr>
<th></th>
<th>DEPOSITS</th>
<th>LIQUIDITY</th>
<th>EQUITY</th>
<th>DEBT</th>
<th>SIZE</th>
<th>LOANS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEPOSITS</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIQUIDITY</td>
<td>-0.4095</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EQUITY</td>
<td>-0.1216</td>
<td>0.3659</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEBT</td>
<td>0.1002</td>
<td>-0.1804</td>
<td>-0.3706</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>0.1437</td>
<td>0.1783</td>
<td>-0.2093</td>
<td>0.2373</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>LOANS</td>
<td>0.1282</td>
<td>-0.358</td>
<td>0.167</td>
<td>-0.2406</td>
<td>-0.4537</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 3: Correlation Matrix
4.4 Regression Results

The regression result is presented in Table 4. The results show that return on equity has a statistically significant positive relationship with debt of listed banks. The results, which are in consistent with previous studies (Titman and Wessels, 1988; Barton et al., 1989) indicates that higher ratio of debt to listed banks assets increases their profitability because banks that depend more on debt, over time represent less risk, hence lower financing cost. The impact of debt on return on assets was however insignificant.

Table 4

<table>
<thead>
<tr>
<th>DEPENDENT VARIABLES</th>
<th>RETURN ON EQUITY</th>
<th>RETURN ON ASSETS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficients</td>
<td>P &gt;</td>
</tr>
<tr>
<td>Constant</td>
<td>1.1189566</td>
<td>0.000*</td>
</tr>
<tr>
<td>DEBT</td>
<td>-0.0050485</td>
<td>0.000*</td>
</tr>
<tr>
<td>LIQUIDITY</td>
<td>0.0417124</td>
<td>0.644</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.0503614</td>
<td>0.000*</td>
</tr>
<tr>
<td>LOANS</td>
<td>0.0484688</td>
<td>0.674</td>
</tr>
<tr>
<td>DEPOSITS</td>
<td>0.5111809</td>
<td>0.001*</td>
</tr>
<tr>
<td>EQUITY</td>
<td>-2.477749</td>
<td>0.000*</td>
</tr>
<tr>
<td>Bank type(FR)</td>
<td>0.0890341</td>
<td>0.009*</td>
</tr>
<tr>
<td>R-Squared</td>
<td></td>
<td>0.7273</td>
</tr>
<tr>
<td>Wald Chi^2(8)</td>
<td></td>
<td>149.83</td>
</tr>
<tr>
<td>Prob&gt;Chi^2</td>
<td></td>
<td>0.0000</td>
</tr>
</tbody>
</table>
The debt ratio from the Table 4 show a significant negative relationship with return on equity but a positive insignificant relationship with return on assets. This indicates that increases in the debts levels of listed banks, comprising mainly of customer deposits reduces the returns generated for equity holders.

Liquidity was found to have insignificant positive relationships with both measures of profitability. The result also shows a negative significant relationship between size and measures of profitability. This means that smaller banks, due to their limited access to equity capital market tend to rely on long-term debt for their financing requirements. The finding is consistent with the empirical evidence that smaller firms use more debt capital than larger firms. Equity was found to have a negative significant relationship with return on equity, but exhibited a negative insignificant relationship with return on assets implying increases in equity of listed banks tend to reduce the returns or profitability, hence the returns to equity holders. Banks loan and advances exhibited a positive insignificant relationship with returns on equity and assets, whilst the deposits ratio showed a positive significant relationship with the two measures of profitability indicating that the increases in the bank liabilities through deposit mobilization enables listed banks create more loans, leading to higher net interest income, hence profitability.

Using a dummy for type of bank ownership, the results indicate that banks with foreign ownership generate higher returns on equity and assets than listed banks with domestic ownership. This finding could imply that listed banks with foreign ownership capitalise on the experience of the parent companies to improve upon their revenue generating activities which impacts on their levels of profitability.
CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The main objective of this paper was to determine the impact of bank deposit on the financial performance of Listed Banks Performance on the Ghanaian Stock Exchange. The sample covers 7 banks for a five year period from 2005 – 2009. Return on Equity was used as the dependent or metric measure of performance. The independent variables used included firm size, equity and debt. All but two of the variables was significant at 1%. This chapter presents the findings of the study, conclusions and recommendations for future research as well as policy implications.

5.2 Summary

Firm performance is highly important as it is used as the bases of return to stakeholders; however, it has not elicited much attention from researchers and practitioners. When firm performance is not properly managed and stakeholders do not get what is expected, it renders the management inefficient and reduces the firms rating in the minds of stakeholders. There may be various external and internal factors that may induce the performance of firms. The present study assesses the impact that debts taken on by firm on the financial performance of listed banks on the Ghana Stock Exchange.
5.3 Conclusion

The purpose of this research was to find the bank deposit on the performance listed banks on the Ghana Exchange Stock. A major factor is that almost all the variables used were significant in determining the performance of banks on the Stock Exchange. The study used returns on equity and returns on assets as measures of bank profitability as the dependent variables with debt, liquidity, loans ratio, type of bank ownership, equity and size as internal company-related factors. The study finds that debt, deposits ratio, equity, type of bank ownership and size had significant impact on return on equity as a measure of financial performance of the listed banks while a significant relationships were found between return on assets a measure of bank performance with size, deposits ratio and type of bank ownership.

5.4 Recommendation

On the basis of the empirical findings relating to this study, further research will be recommended. Future researchers could look at the reason why debt has a negative relationship with return on assets as well as the negative but insignificant relationship between the measures of profitability and bank liquidity.

The study could also be stretched to cover all banks as well as increasing the number of years. Again, other variables such as corporate governance, tangibility, research and development which impact on bank performance can be included. With the availability of data, one could use two independent variables for size, creating two groups of companies that would fall under small
and large sized companies as well different measures of financial performance such as Return on Assets and Dividend yield.
References


