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KNUST

TOPIC: THE EFFECT OF CAPITAL STRUCTURE ON

BANKS' PERFORMANCE IN GHANA
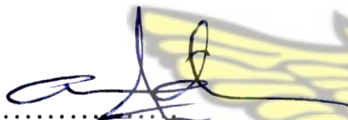
BY

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AUGUST, 2009

DECLARATION

I hereby declare that the work which is being presented in this thesis entitled "The effect of Capital Structure on Banks Performance in Ghana" by Samuel Mensah in partial fulfillment of requirements for the award of Masters in Business Administration, is an authentic record of my own work except where otherwise stated under the supervision of Mr. Gordon Newlove Asamoah.

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DEDICATION

I dedicate this work to my dear wife, Mrs. Marian Ayensu Mensah and my sons, Leslie and Lord for their prayers, patience, love, encouragement and support during the course of my study.

I also dedicate this research work to my late father, Mr. Isaac Mensah and my mother, Madam Mercy Cobbinah for the quality education given me.
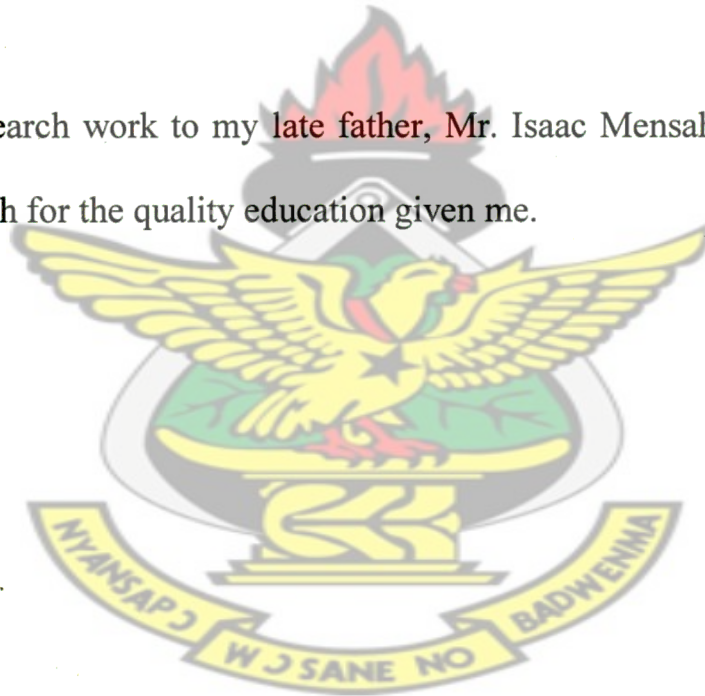
ABSTRACT

The Pecking Order Theory suggests that firms will initially rely on internally generated funds, that is, undistributed earnings, where there is no existence of information asymmetry, then they will turn to debts if additional funds are needed and finally issue equity to cover any remaining capital requirements. The main objective of this study is to determine whether this theory applies to banks in Ghana in terms of debts and equity.

In all fourteen banks in Ghana were selected within a time framework of ten years spanning 1998-2007. Regression analysis was used to examine the effects of debts and equity on the performance of banks in Ghana. The results indicated that debts and equity positively affect performance of banks in Ghana. However, the effect of equity on banks performance is stronger than that of debts. Thus, banks in Ghana may use the mix of debts and equity in their financing decisions.
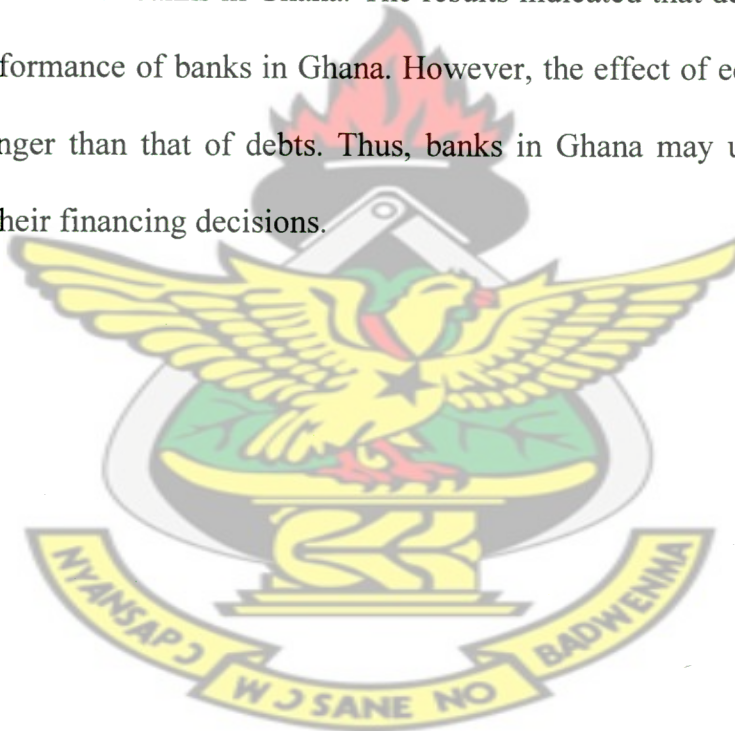
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I would like to give thanks to the God Almighty for his love and mercies and making all things possible.

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CHAPTER ONE

GENERAL INTRODUCTION

1.0 INTRODUCTION

The literature on corporate finance has seen some significant progress since the seminal works of Modigliani and Miller (1958; 1963). Theoretical advancement, particularly development of capital structure models based on tax balancing and asymmetric information, and more recently, on product-market and corporate control considerations, have managed to shed some light on the financing behaviour of corporations. The validity of the modern theory of finance has been tested by many researchers. Numerous studies have also investigated the capital structure of firms in various sectors of the economy, such as manufacturing firms (Long and Malitz, 1985; Titman and Wessels, 1988), electric-utility companies (Miller and Modigliani, 1966), non-profit hospitals (Wedig et al., 1988) and agricultural firms (Jensen and Langemeier, 1996). The effects of capital structure on banks performance is therefore an interesting area of study in order to join in the on going debate.

1.1 BACKGROUND TO THE STUDY

Firstly the tax based model hypothesizes that firms choose their debt-equity ratio by trading off the benefits from tax reduction on interest payments against the costs of financial distress due to accumulating more debt. However, in the firms where individuals who supply capital do not run the firms themselves, there exist two types of asymmetric information problems. The first problem arises when there is adverse selection. The controlling managers may possess some information that is unknown to outside investors. In such cases the financing method can serve as a signal to outside investors. Facing information asymmetry between inside and outside investors, firms end up having a financial hierarchy. First they try to use their retained earnings, and then move to riskless debt when their internal fund runs out.

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Equity is issued only when firms have no more debt capacity Myers, (1984); Myers and Majluf, (1984).

The second problem due to information asymmetry is the principal-agent conflict. The conflict arises when there is moral hazard inside the firm, which is called the agency costs of equity. Managers may pursue their own interests which may conflict with shareholders' benefits. This agency problem can be solved by increasing management ownership because high management ownership aligns the interests of management and shareholders Jensen and Meckling, (1976). Other possibilities include monitoring of management by large shareholders Shleifer and Vishny, (1986), and the use of debt financing to discipline managers Jensen, (1986); Stulz, (1990). However, debt financing creates other agency costs. Jensen and Meckling (1976) argue that managers on behalf of the existing shareholders are likely to expropriate wealth from their debt-holders by conducting asset-substitution behavior. That is they may invest in risky projects because if unsuccessful, the costs will be shared. But if successful, the existing shareholders will capture the gain. On the other hand, Myers (1977) argues that firms with heavy debt may have to pass up their value-increasing projects merely because they cannot afford to pay their current debt the debt overhang problem. Therefore, in choosing their debt-equity level, firms should trade off between the agency costs of debt and the agency costs of equity.

Capital composition matters to most firms in free markets, but there are differences. Companies in non-financial industries need capital mainly to support funding such as to buy property and to build or acquire production facilities and equipment to pursue new areas of business. While this is also true for banks, their main focus is somewhat different. By its very nature, banking is an attempt to manage multiple and seemingly opposing needs. Banks

provide liquidity on demand to depositors through the current account and extend credit as well as liquidity to their borrowers through lines of credit (Kashyap et al., 1999). Owing to these fundamental roles, banks have always been concerned with both solvency and liquidity. Given the central role of market and credit risk in their core business, the success of banks depend on their ability to identify, assess, monitor and manage these risks in a sound and sophisticated way. Llewellyn (1992) confirmed that competitive and regulatory pressures are likely to reinforce the central strategic issue of capital and profitability and cost of equity capital in shaping banking strategy.

In order to assess and manage risks, banks must have effective ways of determining the appropriate amount of capital that is necessary to absorb unexpected losses arising from their market, credit and operational risk exposures. In addition to this, profits that arise from various business activities of the banks need to be evaluated relative to the capital necessary to cover the associated risks. These two major links to capital – risk as a basis to determine capital and the measurement of profitability against risk-based capital allocations – explain the critical role of capital as a key component in the management of bank portfolios.

There has been a great deal of research in the area of international accounting and finance (Remmers et al., 1974; Rajam and Zingales, 1995; Prasad et al., 1996) on the international differences in capital norms (Aggarwal, 1981), the impact of national culture on the capital of firms (Park, 1998) and the relationship between capital and ownership structure (Kester, 1986; Thompson and Wright, 1995). Numerous studies have investigated the capital structure of firms in various sectors of the economy; such as manufacturing firms (Long and Matlitz, 1985; Titman and Wessels, 1988), electric-utility companies (Miller and Modigliani, 1966), non-profit hospitals (Wedig et al., 1988) and agricultural firms (Jensen and Langemeier,

1996). One of the main conclusions of empirical studies is that industrial classification is an important determinant of capital structure.

The capital structure of banks is, however, still a relatively under-explored area in the banking literature. Currently, there is no clear understanding on how banks choose their capital structure and what factors influence their corporate financing behaviour. Houston et al. (1997) found that lending at large banks is less subject to changes in cash flow and capital. Jayaratne and Morgan (1999) found that shifts in deposit supply affect lending at small banks that do not have access to the large internal capital market. Akhavein et al. (1997) also pointed to the fact that large banks tend to decrease their capital and increase their lending after mergers. Bank size seems to allow banks to operate with less capital and, at the same time, engage in more lending. Abor and Biekpe (2005) pointed out that, more than 50 per cent of the assets of listed firms in Ghana are financed by debt and that there is a correlation between debt ratio and firm size, growth, asset tangibility, risk, and corporate tax. Another area where the study of capital structure was virtually non-existent is the sector of Microfinance. Kyereboah-Coleman (2007) in his study of the impact of capital structure on the performance of microfinance institutions in Ghana, found out that Microfinance Institutions are highly leveraged. His findings also conceded that leverage irrespective of its maturity period is positively related to Microfinance Institutions asset tangibility and that profitability is irrelevant in Microfinance Institutions capital structure.

Given the unique financial features of banks and the environment in which they operate, there are strong grounds for a separate study on capital structure determinants of banks.

1.2 THE STATEMENT OF THE PROBLEM

The recent trend towards deregulation and liberalization of the financial and the banking systems and the blurring of the boundaries demarcating the operations of banks and non bank financial institutions have led to the influx of foreign banks which borders on capital requirement as well as the structure of the capital.

Considering the recent increases in the authorized capital (capital requirement) by the central Bank and its subsequent inadequate liquid reserve of some banks in the country, this study primarily aims at conducting a comprehensive study on a number of factors that try to examine the problem some of which are stated below.

- Appears the capital structure of Banks impact on their performance.

- Seems to indicate that Equity affects Capital Structure and hence Banks performance.

- Seems to indicate that Debts affects the capital structure and hence the performance of banks

- Indicates that both Equity and Debts help to determine the optimal capital structure of banks and their performance.

1.3 JUSTIFICATION OF THE STUDY

The pecking order theory suggest that firms will initially rely on internally generated funds, debt and equity (in the order of preference) to finance their operations. This study is intended to find out whether this is the case for Ghana in terms of equity and debt. In other words, the study seeks to find out whether banks in Ghana use to debt and equity in financing their operations.

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Thus, the outcome of this study will create awareness on the part of banks to know whether they are on course or not. This will help them to take pragmatic measures in situations where they have swayed from the path.

1.4 THE OBJECTIVE OF THE STUDY

The purpose of this study is to present empirical evidence on the analysis of capital structure of banks from the context of a fourteen (14) selected banks in the country by including more firms variables apart from the size effects. Specifically, the objectives are:

- To investigate the dynamics involve in the determination of the capital structure of some banks in Ghana.

- To provide an insight into the capital structure of some banks in Ghana.

- To identify the impact of key financial indicators; Debt to total assets, Equity to Total assets, consumer price index, gross domestic product and bank size, on one of the key performance parameters Return on Assets (ROA).

1.5 THE SIGNIFICANCE OF THE STUDY

- To suggest appropriate strategies and specific actions that management should take in order to protect and improve the capital structure of banks to ensure their high performance.

- The studies will further assist in the on going debate on issues relating to Banks performance and their structure.

- It will also serve as a platform upon which further studies in this area could be developed.

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1.6 LIMITATION OF THE STUDY

In the first instance, the collection of the data collection was quite time consuming than the researcher anticipated. Although the topic appears to have enough literatures, obtaining access to these literatures proves to be problematic.

Again, the study is limited to ten (14) banks, although there are currently a total number of twenty-six (26) banks in Ghana. This is as a result of the time framework spanning from 1998 – 2007, a ten year period of which information not available to most of the banks were excluded.

Lastly the study was based on published annual accounts information, which is mostly secondary data in nature. This is because the data has been published to meet some purposes of management and stakeholders but not for this research.

1.7 THE ORGANISATION OF THE STUDY

The research has been divided into five distinct chapters.

Chapter one presents the general introduction to the study. It contains the background to the study of the capital structure of some selected banks in Ghana. There is also the statement of the problem, justification of the study, the purpose of the study, the limitation of the study, the significance of the study and it concludes with the organisation of the study.

Chapter two deals with the related literature. It takes into consideration both theoretical and empirical works of individuals and groups ranging from journal of corporate finance and risk, journal of economics, articles, which serves as yardstick discussing the empirical findings of the study.

Chapter three addresses the method for collecting and analysing data as well as over of the banking sector. It is the actual field work of the study. Here the researcher considers the population of banks in Ghana delimiting it to fourteen (14) selected banks spanning for a period of ten years as the area of study. In addition to the above, the chapter focuses on the administration of the instrument, the procedure as well as issues that may crop up.

Chapter four considers the presentation, findings and analysis of preliminary data that have been gathered on the research.

Chapter five, which is the concluding chapter attempts to synthesis the summary of the study and also to offer useful recommendations towards the players in this field, including the academia and other interested parties.

CHAPTER TWO

OVERVIEW OF BANKING IN GHANA

2.0   INTRODUCTION

This reviews briefly, the developments in the banking sector since banking in Ghana in 1888.

Two stages in the development of banking in Ghana are clearly identified, in addition to the

In- informal Financial Sector and Structure of Banking System. These are

i.   The period of Colonial rule (1896 -1956)

ii.   The Post- Independence period and the era of controlled economy (1957-1982).

iii.   Informal Financial Sector.

iv.   Structure of Banking System.

2.1   COLONIAL PERIOD

The first bank to be established in 'The Gold Coast' was Government Savings Bank in 1888.

This was followed by the Bank for British West Africa (BBWA) in June 1896. BBWA was

empowered to import and distribute coins on behalf of the Government. The bank was also

to assist the Colonial Government in the early years of colonialization to change the barter

economy to an exchange or monetised economy.   This currency function on BBWA

expanded when the West African Currency Board (WACB) was established in November,

1912. The other functions of the bank included the provision of banking services to the

Colonial Administration and the British trading enterprises.

BBWA contributed immensely in monetizing the economy of Gold Coast through the

importation and distribution of coins, and promotion and expansion of trade via the facilities

it offered in financing merchants.

According to Anin (1997), the establishment of BBWA was largely influenced by the pioneering spirit and shinning efforts of indigenous Fanti entrepreneurs in gold extraction, cultivation of palm oil, rubber and other each crops and the achievements of Akuapem Cocoa farmers. The efforts facilitated trade between the indigenes and the expatriate business community.

Between 1912-1957, the WACB operated as a central bank operating a Sterling Exchanges Standard through a guaranteed convertibility of the West African Pound to the British Pound Sterling, but did not have any central banking functions. It did not exchange control over the volume of currency or issue. The Colonial Administration could also not exercise any control over the currency supply. WACB operated as a bureau exchanging West African currency for Pound Sterling and vice versa. It invested its surpluses in approved sterling securities.

The Colonial Bank (now Barclays Bank) was established in 1917. The first indigenous bank, Bank of 'The Gold Coast' was established by an Ordinance No. 49, which also defined the objects, power and duties of the new bank. The bank was a result of along fight by the politicians and businessmen against the discriminatory practices of the foreign banks towards black man, especially in credit allocation. There was virtually no non-bank financial institution. The banking system was thus synonymous with the financial sector.

During this era, the colonial government restricted itself to monetary stability and monetary growth was tied to export performance. The banking system was narrow and essentially provided currency infrastructure, which led to the transformation of the colonial economy from a barter system to a modern currency system. It played a passive and limited role in promoting economic development. The Colonial Government did no formulate any clearly

defined legal and regulatory frame work to govern the operations and supervision of banks, which were literally free to anything.

2.2   POST INDEPENDENCE PERIOD

The name of Gold Coast was changed to Ghana in1957. This era saw massive structural changes in the economic, political and social spheres of life. The national philosophy at the time was development through state control of the economy. The factors, which shaped this philosophy, include the following:

1.   The need to promote national development at an accelerated pace.

2.   The need to establish a central bank that would issue currency and supervise the banks. This was motivated by some limitations of the WACB such as the following:

   a.   Automatic relationship between money supply and trade balance. Money supply was allowed to increase with the surplus and to contract with deficit.

   Thus domestic money supply was determined by the state of the balance of payment rather than actual national needs.

   b.   There was a direct link between the local currency and the British Pound Sterling which meant that fluctuations in the value of the sterling and in the British economy were automatically transmitted to the value of the local currency and the domestic economy.

   c.   The monetary system's obligation to hold currency to cover assets in sterling created the situation where Ghana, like the other less developed countries of the system, were financing investments in the United Kingdom.

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3.   The need to expand the number and spread of commercial banks to both urban and rural areas so as to enhance deposit mobilization, credit delivery and monetization of the economy.

4.   The creation of development banks to meet the medium and long-term credit needs of native customers.

In response to these needs, statutes were passed to establish banks, which were fully owned by the state or its agencies and had specific functions to perform. For instance;

- The Bank of Ghana (BOG) Ordinance No. 34 of 1957 established the Bank of Ghana on 4th March, 1957.

- .The Bank of Ghana Act was passed in 1963. Under it, BOH was required to submit a report to the Government anytime to money supply growth exceeded 15% for any year, stating reasons for the rise and recommending measures to contain the associated inflationary pressures.

- BOG was also empowered to set ceilings on advances or investments by commercial banks and given powers to control the banking system. New credit control measures were introduced in 1964 to control and direct the granting of credit to be in accordance with the government's economic policy. Quantitative restrictions on interest rates were introduced. There was also force-lending programme including requirements for banks to lend to sectors of the economy which were considered priority by the government.

By 1963, it was felt in government circles that the commercial banks were not suited to the task of mobilising funds to finance medium and long-term development projects, due to their policy of ''borrowing short and leading short''. Consequently, the National Investment Bank

(NIB) was established in 1963 and Agricultural Credit & Co-operative Bank (ACCB) in 1965. The former was to help expand and modernize commercial enterprises while the latter while the latter was principally to finance agriculture. ACCB is now Agriculture Development Bank (ADB).

The defunct Bank for Housing and Construction was established in 1972 to provide finance for the building and construction industry. In the same year, Merchant Bank was incorporated to offer "one stop" corporate banking services. Its main operations consisted of taking wholes deposit of corporate funds, provide venture capital, provide term leading to corporate business, deal in shares, finance imports and exports and to offer business advisory services. It commenced business on 15th March 1972. NRC Decree 38 hived-off the Savings Section of the old Colonial Post Officer system and incorporated it as Post Office Saving Bank, which later became National Savings and Credit Bank.

In 1972, the Acheampong Administration issued a Participation Decree, which authorized the Government to acquire by purchase, up to 40% of equity in the then two foreign or expatriate banks – Standard Bank and Barclays Bank. It is worth mentioning that with the establishment of domestic banks, the expatriate banks lost government business to the state-owned banks. The role in cocoa financing also reduced. However, they preserved and maintained their hold on lucrative banking business of the multinational companies to this day.

In 1977, Social security Bank (SSB), now SC-SSB commenced retail-banking business. It introduced a Consumer Credit Scheme to provide personal loans and consumer durables on hire purchase to salaried workers. The Bank for Credit and Commerce (BCC) was incorporated in March 1978. It was the third foreign bank and its mission was to offer corporate and merchant banking services.

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By 1970s, it has become evident that the ADB, which was established to assist the small-scale farmer, did not have the capability to provide adequate rural coverage. Consequently, the BOG commissioned a detailed study of the problem of extending banking facilities to the rural areas. The BOG sponsored the establishment of the first rural bank at Agona Nyakrom in July 1976. By December 1987 one hundred and seventeen (117) rural banks had been established.

Some Non-Bank financial Institutions (NBFIs) were also established during this era. The State Insurance Corporation and Social Security and National Insurance Trust were incorporated in 1962 and 1965 respectively to moblise long term capital for development. Some private insurance companies also emerged. National Trust Holding Company (NTHC) was established in 1976 to operate as a mutual fund. The objective was to use (NTHC) to support the Government's indigenization programme. It acquired shares of foreign companies and sold them to Ghanaians in what were essentially an over-the counter market, the first and only one of its kind in Ghana.

Thus by 1978 the number of bank had increased from three in the colonial era to eleven by 1987.The number of bank branches also increased appreciably. For instance, the number of Ghana Commercial Bank branches increase from three (3) in 1957 to one hundred and twenty (120) in 1978' and one hundred thirty-seven (137) as of 2008 (Ghana Commercial Bank Annual Report p. 25).

Financial policies such as interest and exchange credit rationing, credit ceilings and high reserve requirement ratio were socialist policy tools, which Ghanaian Government from 1960 to 1982 adopted either openly or tacitly in the implementation of their economic policy. A comprehensive system of import licensing was instituted in November 1961. The Exchange Control Act of 161 imposed all-embracing exchange controls over the entire range of

economic activities in Ghana. Virtually every foreign transaction could be undertaken only with official permission. BOG became the pivot of all international banking of foreign exchange for travel or tourism, and even subscription for foreign journals. Forms had to be completed in quadruplicates, causing wastage in bank manpower as dozons of extra staff had to be employed to type out and complete Exchange Control Forms (Anin, 1997).

2.3 THE INFORMAL FINANCIAL SECTOR

According to Aryeetey and Gockel (1992), available evidence shows that financial structure in Ghana is dualistic in the sence that the formal (organized) structure exists side by side with the informal (unorganized) financial structure. The term ''informal financial sector'' is used here to describe participation in all commercial savings and lending activities taking place outside of the formal or established financial institutions. The informal sector in Ghana derives its dynamism from the weakness within the formal sector and also from its own internal characteristics. Some of these developments include the formal sectors' preference for only those with high incomes so as to avoid small frequent deposit of torn notes. Again, the customers were uncomfortable with too much formality at the banks. Contrarily, the informal sector accepts no collateral securities as requirement for credit from customers, and avoid too much of formality. The results were that the informal sector began to grow on the formal banking sector's customers and hence deposits of the formal sector. In this regard, it is important to know the suggestion of Aryeetey et al. (1990) that various indications of the size of formal financial savings showed a declining trend as interest in the informal sector grew between 1976 to 1984

2.4.0 STRUCTURE OF THE BANKING SYSTEM

With the informal sector playing a significant role in the economy in terms of financial resource mobilization, we can divide the formal banking system in Ghana into five markets; the central bank, commercial, merchant, development, the rural banks and the informal financial sector.

2.4.1 THE CENTRAL BANK

The Bank of Ghana was established on March 1957 under the Bank of Ghana Ordinance (1957) initially, only the Issues and Banking department were put in place for operation. It has over the years added other departments progressively, and established regional offices. The 1957 ordinance was later replaced by the Bank of Ghana Act of 1963, which clearly spelt out the objectives of the central bank among them the regulate and direct the credit and banking system in Ghana in accordance with the economic policy of the government and the provisions of this Act.

Later, the Banking Law of 1989 (PNDVL225) empowers the Bank of Ghana to become the supervisory authority over the business of banking in Ghana. Consequently, the bank of Ghana has the responsibility of ensuring that, the solvency of the banking system, quality of assets, adequate liquidity and profitability of the banks are maintained as well as enforcing statutory and regulatory requirements.

In 1992, a new Bank of Ghana Law (PNDC)L 291) was promulgated to streamline the structure, functions and power of the central bank as a supervisor and a regulator of the banking and financial system in Ghana. Although the Bank of Ghana maintains operational authority over the banking system, the Minister of Finance and Economic Planning exercises administrative responsibility. However, under the Fourth Republican Constitution, the

Governor of the BOG enjoys quasi-independence by having a term that outlasts the government (Sowa, 1996).

2.4.2 COMMERCIAL BANKS

There were nine Commercial Banks as at (2003) in Ghana. These banks accept deposits including checking and offer credit services to both individuals and companies. Before independence, only three Commercials Banks operated in Ghana, the now Standard Chartered Bank, the Barclays Bank then Colonial Bank; and Post Office Saving Bank (established in 1888). By 1988, before the financial sector reforms, six Commercial Banks were in existence, of which two – the National Credit and Savings Bank and Bank for Credit and Commerce International – were later liquidated. Four banks – the Standard Chartered, Barclays, Ghana Commercial and Social Security Banks dominated commercial banking and current account service. Other include the metropolitan and Allied Bank now (UT Bank), the Trust Bank, International Commercial Bank, Stanbic Bank, Amalgamated Bank and Unibank. The new Banking Act of 1989 makes provision for licensing additional commercial banks to foster competition in the financial sector.

2.4.3 MERCHANT BANKS

Merchant banks are to accept deposits and open checking accounts for only corporate bodies. However, they open accounts for individual trading business names with high net worth and with relatively substantial turnovers as well as for individuals (non-traders) who have big deposits or whose incomes are substantial; the functional distinction among the banks is contiguous. As the name connote, they also engage in offshore, export and import business, and here they offer stiff competition to well-known accomplished foreign creditor banks with regards to quantity product and efficient services. As financier to merchandise, they offer such subsidiary functions as administration of letters of credit, guarantees on behalf of their

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customers, etc. The individual banks in the merchant banking business in Ghana as at present (2003) include the Merchant Bank of Ghana Ltd. Cal Merchant Bank Ltd and First Atlantic Merchant Bank.

2.4.4 DEVELOPMENT BANKS

As at (in 2003), the National Investment Bank, Agricultural Development Bank and Prudential Bank from this group. Expected to source the source the greater part of loanable funds from the central bank or external donors, these are to provide lines of credit to the production sectors of the economy. However, because of the fact that the government has not enough funds to inject and donor funds may also be scarce, the three development banks in Ghana have since their inception been taking deposits, opening current accounts and undertaking all kinds of commercial banking activities in a bid mobilize deposits locally on their own.

2.4.5 RURAL BANKS

The rural banks are owned and managed by their local communities. They were meant to be private unit banks established to mobilize resources in rural areas and extent credit locally. In other words, the main functions of the rural banks in Ghana is that of supporting the function of money, namely to provide liquidity lines of credit, which constitute a large share of credit. The Bank of Ghana has usually contributed to the initial capital of each rural bank with the intention of divesting its holdings to the private owners at a latter stage. Despite the large number of rural banks, the rural banking sector forms under 3% of the total deposits mobilized by the banking system as a whole. A larger number of rural banks are in financial difficulties, but their "unit" nature has contained the effect of this problem on the banking system.

During the early years of Ghana's independence, the government intervened extensively in the financial markets in Ghana in an attempt to control the cost and direction of finance. Public sector banks were set up and administrative controls were imposed on interest rates and sectoral allocation of bank credits. Less attention was accorded to prudential banking. Since, the late 1980s, financial sector reforms have been implemented and significant progress has been made. The public sector banks have adopted effective credit policies. They have strengthened their credit procedures and internal controls and reduced staffing levels. A new banking law PNDCL 225 was enacted to define capital adequacy, minimum capital requirement, prudential lending, standardised reporting and accounting procedures and strengthening of the supervisory capacity of the Bank of Ghana.

Despite the improvements in the institutional structures of the banking system brought about by the reforms, the system has not achieved much developmental and progress. The liquidation of Bank for Housing and Construction and Ghana Co-operative Bank in January 2000 and the collapse of Bank for Credit and Commerce in June 2000 called for pragmatic approaches in capital adequacy, including holding a capital buffer of sufficient size, enough liquid assets, and engaging in efficient risk management. Froot et al. (1993) and Froot and Stein (1998) present theoretical analyses of how these factors (capital size, enough liquid assets, and risk management) affect banks' financing and lending decisions. They noted that active risk management allows banks to hold less and to invest more aggressively in risk and illiquid loans.

CHAPTER THREE

LITERATURE REVIEW

3.0 INTRODUCTION

One of the important financial decisions confronting a firm is the choice between debt and equity according to Glen and Pinto (1994). The linkage between capital structure and firm value has engaged the attention of both academics and practitioners. Indeed, the famous seminal paper by Modigliani and Miller (1958) set the stage for numerous propositions that have been developed to provide the theoretical underpinnings of this crucial concept. Theoretical advancement with emphasis of shaping capital structure models based on tax balancing and information asymmetry, product market, corporate governance have aided in understanding the financing behaviour of corporate entities. Argument amongst others has centred on the determination of an optimal capital structure for a specific firm and also as to whether the quantum of debt usage in relation to equity is irrelevant to a firm's worth.

After their initial presentation stating that capital structure is irrelevant to firm value, Modigliani and Miller in 1963 revised their position by incorporating tax benefits as determinants of capital structure. In this new dimension, the essential characteristic of taxation is the recognition of interest as a tax-deductible expenditure.

To strengthen this argument, Modigliani and Miller (1963) explain that a firm that honours its tax obligation benefits from partially offsetting interest called "tax shield" in the nature of payment of lower taxes. This therefore is a tacit admission that capital structure influences firm value. They, thus, state that firms should use as much debt as possible in order to maximize their value.

Subsequent to this, several studies have looked at the linkage between capital structure and firm value and more especially after the paper by Jensen and Meckling in 1976. There is the

argument that greater financial leverage has the possibility of affecting managers and reducing agency cost through the threat of liquidation which caus es personal losses to managers' salaries, reputation, perquisites etc. (e.g. Grossman and Hart, 1982; Williams, 1987), and also through pressure to generate cash flows to pay interest expenses (Jensen, 1986). Emanating from the foregoing discussion, higher leverage is considered an appropriate method to employ in order to mitigate conflicts between shareholders and managers concerning the type of investment to undertake, (Myers, 1977), the amount of risk to undertake, (Jensen and Meckling, 1976; Williams, 1987), the conditions under which the firm is liquidated, (Harris and Raviv, 1990), and even decisions regarding dividend policy, (Stulz, 1990).

Berger and Bonaccorsi di Patti (2005), state that, whereas increased leverage may reduce the agency costs of outside equity, the opposite effect may occur for the agency costs of outside debt arising from conflict between debt holders and shareholders, and that when leverage becomes relatively high, further increases may generate significant agency costs of outside debt from risk shifting or reduced effort to control risk that result in higher expected costs of financial distress, bankruptcy, or liquidation. Such agency costs leads to higher interest expenses for firms to be able to compensate debt holders for their expected losses. Thus, capital structure which is defined as total debt to total assets at book value, impacts on both the profitability and riskiness of a firm (Bos and Fetherston, 1993), and when a firm exhibits greater gearing, it has a higher possibility for failure in the event that cash flows fall short of the required volume to honour debt obligations. According to Jensen and Meckling (1976), the influence of leverage on total agency cost is expected to be non-monotonic. Therefore, at low levels of leverage, increases will produce positive incentives for managers and reduce total agency costs by reducing agency costs of outside equity. Berger and Bonaccorsi di Patti

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(2006) show however that at some point where bankruptcy and distress become more likely, the agency costs of outside debt overwhelm the agency cost of outside equity, and therefore further increases in leverage lead to higher total agency cost. In all this debate, one important conclusion that has emerged is the fact that the structure of a firm's capital has implications for its operations and impacts on its performance. Though much of the debate on capital structure has centred on the determination of an optimal composition of debt and equity for firms, it lacks theoretical foundation and that empirical results show that firms with diverse idiosyncrasies require what is considered an acceptable level of debt and equity mix taking into consideration their peculiar characteristics and the environment within which they operate for effective operation and to deal with agency cost.

There are three types of agency costs which can help explain the relevance of capital structure.

- Asset substitution effect: As Debt/Equity increases, management has an increased incentive to undertake risky (even negative NPV) projects. This is because if the project is successful, shareholders get all the upside, whereas if it is unsuccessful, debtholders get all the downside. If the projects are undertaken, there is a chance of firm value decreasing and a wealth transfer from debt holders to share holders.

- Underinvestment problem: If debt is risky (eg in a growth company), the gain from the project will accrue to debt holders rather than shareholders. Thus, management have an incentive to reject positive NPV projects, even though they have the potential to increase firm value.

- Free cash flow: unless free cash flow is given back to investors, management has an incentive to destroy firm value through empire building and perks etc. Increasing leverage imposes financial discipline on management.

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The theoretical principles underlying the capital structure, financing and lending choices of firms can further be described either in terms of a static trade-off choice or pecking order framework. Pecking Order theory tries to capture the costs of asymmetric information. It states that companies prioritize their sources of financing (from internal financing to equity) according to the law of least effort, or of least resistance, preferring to raise equity as a financing means "of last resort". Hence: internal debt is used first; when that is depleted, then debt is issued; and when it is no longer sensible to issue any more debt, equity is issued. This theory maintains that businesses adhere to a hierarchy of financing sources and prefer internal financing when available, and debt is preferred over equity if external financing is required. Thus, the form of debt a firm chooses can act as a signal of its need for external finance. The pecking order theory is popularized by Myers (1984), when he argues that equity is a less preferred means to raise capital because when managers (who are assumed to know better about true condition of the firm than investors) issue new equity, investors believe that managers think that the firm is overvalued and managers are taking advantage of this over-valuation. As a result, investors will place a lower value to the new equity issuance. The static trade-off choice encompasses several aspects, including the exposure of the firm to bankruptcy and agency cost against tax benefits associated with debt use.

3.1 BANKRUPTCY COST

Bankruptcy costs are the cost directly incurred when the perceived probability that the firm will default on financing is greater than zero. The bankruptcy probability increases with debt level since it increases the fear that the company might not be able to generate profits to pay back the interest and the loans. The potential costs of bankruptcy may be both direct and indirect. Examples of direct bankruptcy costs are the legal and administrative costs in the bankruptcy process. Examples of indirect bankruptcy costs are the loss in profits incurred by

the firm as a result of the unwillingness of stakeholders to do business with them (Titman, 1984).

One of the bankruptcy costs is liquidation costs, which represents the loss of value as a result of liquidating the net assets of the firm. This liquidation cost reduces the proceeds to the lender, should the firm default on finance payments and become insolvent. Given the reduced proceeds, financiers will adjust their cost of finance to firms in order to incorporate this potential loss of value. Firms will, therefore, incur higher finance costs due to the potential liquidation costs (Cassar and Holmes, 2003).

3.2 DISTRESS COST

Another cost that is associated with the bankruptcy cost is distress cost. This is the cost a firm incurs if non-lending stakeholders believe that the firm will discontinue. If a business is perceived to be close to bankruptcy, customers may be less willing to buy goods and services due to the risk of a firm not being able to meet its warranty obligations. In addition, employees might be less inclined to work for the business and suppliers less likely to extend trade credit. These stakeholders' behaviour effectively reduces the value of the firm. Therefore, firms which have high distress cost would have incentives to decrease debt financing so as to lower these costs. Given these bankruptcy costs, the operating risk of the firm would also influence the capital structure choice of the firm because firms which have higher operating risk would be exposed to higher bankruptcy costs, making cost of debt financing greater for higher risk firms. Research has found that high growth firms often display similar financial and operating profiles (Hutchinson and Mengersen, 1989).

3.3 AGENCY COST

Debt financing may also lead to agency costs. Agency costs are the costs that arise as a result of a principal-stakeholder relationship, such as the relationship between equity-holders or managers of the firm and debt holders. Myers and Majluf (1984) showed that, given the incentive for the firm to benefit equity-holders at the expense of debt holders, debt-holders need to restrict and monitor the firm's behaviour. These contracting behaviours increase the cost of capital offered to the firm. Thus, firms with relatively higher agency costs due to the inherent conflict between the firm and the debt-holders should have lower levels of outside debt financing and leverage.

Agency costs arise as a result of the relationships between shareholders and managers and those between debt-holders and shareholders (Jensen and Meckling, 1976). The need to balance gains and costs of debt financing emerged as a theory known as the static trade-off theory by Myers (1984). It values the company as the value of the firm if unlevered plus the present value of the tax shield minus the present value of bankruptcy and agency costs.

3.4 INFORMATION ASYMMETRY

The concept of optimal capital structure is also expressed by Myers (1984) and Myers and Majluf (1984), based on the notion of asymmetric information. The existence of information asymmetries between the firm and likely finance providers causes the rela tive costs of finance to vary between the different sources of finance. For instance, an internal source of finance where the funds provider is the firm will have more information about the firm than new equity holders; thus, these new equity holders will expect a higher rate of return on their investments. This means that it will cost the firm more to issue fresh equity shares than using internal funds. Similarly, this argument could be provided between internal finance and new debt holders. The conclusion drawn from the asymmetric information theories is that there is

a hierarchy of firm preferences with respect to the financing of their investments (Myers and Majluf, 1984).

Firms also consider within the static trade-off framework, the tax benefits associated with the use of debt. This benefit is created as the interest payments associated with debt are tax deductible while payments associated with equity such as dividends are appropriated from profit. This tax effect encourages the use of debt by firms as more debt increases the after-tax proceeds to the owner. The theory among other things predicts a positive relationship between tax and leverage.

3.5 PECKING ORDER THEORY

This "pecking order" theory suggests that firms will initially rely on internally generated funds, i.e. undistributed earnings, where there is no existence of information asymmetry, then they will turn to debt if additional funds are needed and finally they will issue equity to cover any remaining capital requirements. The order of preferences reflects the relative costs of various financing options. The pecking order hypothesis suggests that firms are willing to sell equity when the market overvalues it (Myers, 1984; Chittenden et al., 1996). This is based on the assumption that managers act in favour of the interest of existing shareholders. As a consequence, they refuse to issue undervalued shares unless the value transfer from "old" to new shareholders is more than offset by the net present value of the growth opportunity. This leads to the conclusion that new shares will only be issued at a higher price than that imposed by the real market value of the firm. Therefore, investors interpret the issuance of equity by a firm as signal of overpricing. If external financing is unavoidable, the firm will opt for secured debt as opposed to risky debt and firms will only issue common stocks as a last resort.

Myers and Majluf (1984), maintain that firms would prefer internal sources to costly external finance. Thus, according to the pecking order hypothesis, firms that are profitable and therefore generate high earnings are expected to use less debt capital than those that do not generate high earnings. Several researchers have tested the effects of profitability on firm leverage. Friend and Lang (1988) and Kester (1986) find a significantly negative relation between profitability and debt/asset ratios. Rajan and Zingales (1995) and Wald (1999) also confirm a significantly negative correlation between profitability and leverage.

The pecking order theory further suggests that firms have a particular preference order for capital used to finance their businesses (Myers, 1984). Owing to the presence of information asymmetries between the firm and potential financiers, the relative costs of finance vary between the financing choices. Where the funds provider is the firm's retained earnings, meaning more information than new equity holders, the new equity holders will expect a higher rate of return on capital invested resulting in the new equity finance being more costly to the firm than using existing internal funds.

A similar argument can be provided between the retained earning and new debt-holders. In addition, the greater the exposure to the risk associated with the information asymmetries for the various financing choices besides retained earnings, the higher the return of capital demanded by each source. Thus, the firm will prefer retained earnings financing to debt, short-term debt over long-term debt and debt over equity.

3.6.0 FIRM CHARACTERISTICS

Theoretical constructs of any empirical research are proxied indirectly through the use of firm characteristics. Thus, the hypotheses and results are interpreted on the basis that several theoretical effects are represented by each variable. The firm variables discussed are profitability, growth, tax, asset structure, risk and size.

3.6.1 PROFITABILITY

Corporate performance has been identified as a potential determinant of capital structure. The tax trade-off models show that profitable firms will employ more debt since they are more likely to have a high tax burden and low bankruptcy risk (Ooi, 1999). However, Myers (1984) prescribes a negative relationship between debt and profitability on the basis that successful companies do not need to depend so much on external funding. They, instead, rely on their internal reserves accumulated from past profits. Titman and Wessels (1988) and Barton et al. (1989), agree that firms with high profit rates, all things being equal, would maintain relatively lower debt ratio since they are able to generate such funds from internal sources. Empirical evidence from previous studies (Chittenden et al., 1996; Coleman and Cole, 1999; Al-Sakran, 2001) appears to be consistent with the pecking order theory. Most studies found a negative relationship between profitability and debt financing.

3.6.2 GROWTH

Applying pecking order arguments, growing firms place a greater demand on their internally generated funds. Consequentially, firms with high growth will tend to look to external funds to finance the growth. Firms would, therefore, look to short-term, less secured debt then to longer-term more secured debt for their financing needs. Myers (1977) confirms this and concludes that firms with a higher proportion of their market value accounted for by growth

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opportunity will have debt capacity. Auerbach (1985) also argues that leverage is inversely related to growth rate because the tax deductibility of interest payments is less valuable to fast growing firms since they usually have non-debt tax shields. Michaelas et al. (1999) found future growth positively related to leverage and long-term debt, while Chittenden et al. (1996) and Jordan et al. (1998) found mixed evidence.

3.6.3 TAX

Different authors on capital structure have given different interpretations of the impact of taxation on corporate financing decisions in the major industrial countries. Some are concerned directly with tax policy. For instance Auerbach (1985), MacKie-Mason (1990), etc. studied the tax impact on corporate financing decisions. The studies provided evidence of substantial tax effect on the choice between debt and equity. They concluded that changes in the marginal tax rate for any firm should affect financing decisions. A firm with a high tax shield is less likely to finance with debt. The reason is that tax shields lower the effective marginal tax rate on interest deduction. Graham (1996) on his part concluded that, in general, taxes do affect

corporate financial decisions, but the extent of the effect is mostly not significant. Ashton (1991) confirms that any tax advantage to debt is likely to be small and thus have a weak relationship between debt usage and tax burden of firms. De Angelo and Masulis (1980) on the other hand, show that depreciation, research and development ex penses, investment deductions, etc. could be substitutes for the fiscal role of debt.

Titman and Wessels (1988) provided that, empirically, the substitution effect has been difficult to measure as finding an accurate proxy for tax reduction that excludes the effect of economic depreciation and expenses is tedious.

3.6.4 ASSETS STRUCTURE

Asset structure is an important determinant of the capital structure of a new firm. The extent to which the firm's assets are tangible and generic would result in the firm having a greater liquidation value (Harris and Raviv, 1991; Titman and Wessels, 1988). Studies have also revealed that leverage is positively associated with the firm's assets. This is consistent with Myers (1977) argument that tangible assets, such as fixed assets, can support a higher debt level as compared to intangible assets, such as growth opportunities. Assets can be redeployed at close to their intrinsic values because they are less specific (Williamson, 1988; Harris, 1994). Thus, assets can be used to pledge as collateral to reduce the potential agency cost associated with debt usage (Smith and Warner, 1979; Stulz and Johnson, 1985). Feri and Jones (1979), Marsh (1982), Long and Matlitz (1985) and Allen (1995) provide empirical evidence of a positive relationship between debt and fixed assets. The empirical evidence suggests a positive relation consistent with the theoretical arguments between asset structure and leverage for large firms (Van der Wijst and Thurik, 1993; Chittenden et al., 1996; Michaelas et al., 1999).

3.6.5 RISK

Given agency and bankruptcy costs, there are incentives for the firm not to utilise the tax benefit of debt within the static framework model. As a firm is exposed to such costs, the greater its incentive to reduce its level of debt within its capital structure. One firm variable which impacts upon this exposure is firm operating risk, in that the more volatile a firm's earnings streams, the greater the chance of the firm defaulting and being exposed to such costs. Firms with relatively higher operating risk will have incentives to have lower leverage than more stable earnings firms. Empirical evidence suggests that there is a negative relationship between risk and leverage of small firms (Ooi, 1999; Titman and Wessels, 1988).

3.6.6 SIZE

Size plays an important role in determining the capital structure of a firm. Researchers have taken the view that large firms are less susceptible to bankruptcy because they tend to be more diversified than smaller companies (Smith and Warner, 1979; Ang and McConnel, 1982). Following the trade-off models of capital structure, large firms should accordingly employ more debt than smaller firms. According to Berryman (1982), lending to small businesses is riskier because of the strong negative correlation between the firm size and the probability of insolvency. Hall (1995) added that, this could partly be due to the limited portfolio management skills and partly due to the attitude of lenders. Marsh (1982) and Titman and Wessels (1988) report a contrary negative relationship between debt ratios and firm size. Marsh (1982) argues that small companies, due to their limited access to equity capital market tend to rely heavily on loans for their funding requirements. Titman and Wessels (1988) further posit that small firms rely less on equity issue because they face a higher per unit issue cost. The relationship between firm size and debt ratio is, therefore, a matter for empirical investigation.

3.7.0 Empirical literature

There have been a number of studies investigating into the determinants of capital structure of firms in different businesses such as, joint ventureships (Boateng, 2004), manufacturing sector (Long and Malitz, 1985; Titman and Wessels, 1988), electricity and utility companies (Miller and Modigliani, 1966), the non-profit hospitals, (Wedig et al. 1988) and in agricultural firms (Jensen and Langemeier, 1996). In these studies, one of the main findings is that industrial or sectoral classification is an important determinant of capital structure. Thus, firms in different sectors employ different mix of debt and equity for their operations. However, studies emphasizing on linkage between capital structure and performance have

been scanty. For instance, Berger and Bonaccorsi di Patti (2006) using data on commercial banks in the USA show that higher leverage or lower equity capital ratio is related to higher profit efficiency, and Abor (2005) on capital structure and profitability of SMEs in Ghana, show that short-term debt ratio is positively correlated with return on equity.

3.7.1 REAL ESTATE AND PROPERTY AND CONSTRUCTION

In a similar study, Chiang et al. (2002), on capital structure and profitability of the property and construction sectors in Hong Kong conclude that while high gearing is positively related to asset, it is negatively related to profit margins. The separation of ownership and management of any corporate entity leading usually to divergent objectives, raises questions on how much debt and equity should be employed. A clear case of agency costs which could be viewed from different perspectives by management and owners. From the foregoing analysis, it is clear that agency cost and capital structure is an important research agenda. Whiles, it raises several research question regarding the banking sector, because of the sector's role as a financial intermediary for monetary policy, and due to their fundamental nature of being informationally opaque, (Berger and Bonaccorsi di Patti, 2006).

The real estate sector has evolved in recent years as a risk prone area. Understanding their operation is critical as well as how the sector is financed. The capital structure of property companies is, however, still a relatively under-explored area in the property literature. Given the unique product-market environment property companies operate within the real estate sector, there are strong grounds justifying a separate study on the capital structure determinants of property companies. Event studies by Howe and Shilling (1988) and Allen and Rutherford (1992) have also shown that stock prices of real estate organisations in the USA do not react to debt issues in the same manner as share prices of other corporations.

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Contrary to the theoretical predictions of corporate finance literature, the two studies observe that companies engaged in the property business are perceived by the market as benefitting from additional leverage.

Gau and Wang (1990) were amongst the first to apply the theory of capital structure directly to real estate investment decisions at the project level. Their optimization model illustrates how certain characteristics of the property may affect the investor's choice of loan-to-value ratio. Based on a sample of 1,423 apartment and commercial property transactions in Vancouver between 1971 and 1985, Gau and Wang observe that the level of debt employed in a property acquisition is directly related to the cost of the investment and inversely to the size of its depreciation tax shield, expected costs of financial distress and market interest rates. The applicability of Wang and Gau's results to the financial context of property companies at the corporate level has not been tested.

There are, nevertheless, two existing studies in the USA that have examined the capital structure of property organizations in a non-tax environment. Maris and Elayan (1990) and Allen (1995) study the financial structure of tax-exempt real estate investment trusts (REITs) and real estate limited partnerships (RELPs) respectively. Both studies yield results which indicate that the nature of the assets owned by an organization has a significant impact on its capital structure.

In a recent study, Barkham (1997) examines the financial structure and ethos of property companies in the UK. The main conclusion of the study is that the classification of property companies as property investment companies (PICs) and property trading companies (PTCs) is valid. PTCs buy and develop property assets with a view to selling them on in the short term, while PICs engage in the acquisition and development of property assets to augment

their portfolio which is held for long term. Barkham notes that the PTCs are more focused on profits whereas the PICs are more concerned with delivering returns to their shareholders via share price movements. He also observes that the PTCs operate against the constant danger of insolvency and indeed when the market turns they become unable to meet interest payments almost immediately. Due to their different ethos, the capital structures of property companies in the two categories are not the same. In particular, Barkham observes that during the study period (between 1987 and 1991) the PTCs are on average more highly-geared than PICs.

This observation, however, contradicts the prediction of the conventional trade-off models of capital structure that risky firms should employ less debt in their capital structure. Although property finance has become more sophisticated in recent years, the property profession has generally been slow to get involved in the financial dynamics of property deals (see Orchard-Lisle, 1987; Barkham and Purdy, 1992; Riley, 1994).

Furthermore, many financial decisions are often explained in the property literature using traditional notions that may not stand the rigours of economic theories (Shah and Thakor, 1987). Existing property literature has also focused largely on property financing at the individual project level. Whilst it is possible to view a corporation as a series of separately financed investment projects, such approach ignores the interaction and synergistic effects of the projects at the firm level (Williamson, 1988). At the corporate level, the whole accountmay equate to the sumof the parts.In examining how the unique characteristics of the sector affects the firm's financing decisions, our research offers an opportunity to combine two important bodies of knowledge, namely real estate and corporate finance. Unlike previous studies in the main stream finance literature, our study extends the range of theoretical determinants to cover characteristics that are unique to the property sector. While

most of the existing studies employed the ordinary least squares (OLS) regressions, we utilize recent development in the econometrics of panel data to estimate the parameters in our capital structure model. A distinct advantage of panel data is that it facilitates testing of economic relationships over time and across companies. We are, therefore, able to examine the effects of macro-economic factors, such as the property market cycle and interest rates, on the firm's leverage decisions. We examine specifically the capital structure determinants of 83 property companies quoted in the UK between 1989 and 1995.

Contrary to the theoretical predictions, our study shows that corporate performance and tax burden do not appear to play any major role in the debt-equity choice of property companies. The empirical evidence further shows that asset structure, type of property companies, level of development undertakings, and business risks have a significant impact on the corporate leverage policy of property companies. In addition, the evidence reveals that property companies consider the prevailing stock market performance and interest rates when making their capital structure decisions.

In their study into French companies in the wine industry, three principal theories aim to explain corporate leverage and its evolution.(Jean-Laurent; 2005) According to the traditional (or static) trade-off theory (TOT), firms select optimal capital structure by comparing the tax benefits of the debt, the costs of bankruptcy and the costs of agency of debt and equity, that is to say the disciplinary role of debt and the fact that debt suffers less from informational costs than outside equity (Modigliani and Miller, 1963; Stiglitz, 1972; Jensen and Meckling, 1976; Myers, 1977; Titman, 1984). So optimal leverage minimizes cost of capital and maximizes firm value. In the so-called pecking order theory (POT) (Donaldson, 1961; Myers and Majluf, 1984; Myers, 1984), because of asymmetries of information

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between insiders and outsiders, the company will prefer to be financed first by internal resources, then by debt and finally by stockholders' equity. The debt ratio depends then on the degree of information asymmetry, on the capacity of self-financing and on the various constraints which the company meets in the access to the various sources of financing.

So, in the pecking order world, observed leverage reflects the past profitability and investment opportunities of the companies. The dynamic trade-off theory (DTOT) tries a compromise between TOT and POT (Fischer et al., 1989; Leland, 1994, 1998). Although, due to information asymmetries, market imperfections and transaction costs, many companies allow their leverage ratios to drift away from their targets for a time, when the distance becomes large enough managers take steps to move their companies back toward the targets. While the POT explains short-run deviation from the target, the traditional TOT holds in the long run. Following this approach, leverage must converge toward a target leverage ratio. That would no be the case following POT because managers make no effort to reverse changes in leverage.

3.7.2 MARKET TIMING AND INERTIA

Two additional theories also reject the notion of timely convergence toward a target leverage ratio. According to the theories of market timing and inertia, the capital structure is the result at a given time of an historical process. Supporters of the market timing approach (Jalilvand and Harris, 1984; Korajczyk et al., 1991; Lucas and McDonald, 1990; Jung et al., 1996; Loughran et al., 1994; Baker and Wurgler, 2002) argue that companies will sell overpriced equity shares. Company's share prices will fluctuate around their true value, and managers tend to issue shares when the market to- book ratio is high. A small debt ratio must thus follow a long period of high market to- book ratio. According to the managerial inertia approach (Welch, 2004) companies do not adjust their debt ratio to the fluctuations of the

market value of their equity. High market-to-book ratio must thus be accompanied by small debt ratios. According to Weston and Brigham (1992), the optimal capital structure is the one that maximizes the market value of the firm's outstanding shares. The seminal work by Modigliani and Miller (1958) in capital structure provided a substantial boost in the development of the theoretical framework within which various theories were about to emerge in the future. Modigliani and Miller (1958) concluded to the broadly known theory of "capital structure irrelevance" where financial leverage does not affect the firm's market value. However their theory was based on very restrictive assumptions that do not hold in the real world.

3.7.3 CAPITAL STRUCTURE IRRELEVANCE THEORY ASSUMPTIONS

These assumptions include perfect capital markets, homogenous expectations, no taxes, and no transaction costs. The presence of bankruptcy costs and favorable tax treatment of interest payments lead to the notion of an "optimal" capital structure which maximizes the value of the firm, or respectively minimizes its total cost of capital. Modigliani and Miller (1963) reviewed their earlier position by incorporating tax benefits as determinants of the capital structure of firms. The key feature of taxation is that interest is a tax-deductible expense. A firm that pays taxes receives a partially offsetting interest "tax-shield" in the form of lower taxes paid. Therefore, as Modigliani and Miller (1963) propose, firms should use as much debt capital as possible in order to maximize their value. Along with corporate taxation, researchers were also interested in analyzing the case of personal taxes imposed on individuals. Miller (1977), based on the tax legislation of the USA, discerns three tax rates that determine the total value of the firm.

These are:

(1) the corporate tax rate;

(2) the tax rate imposed on the income of the dividends; and

(3) the tax rate imposed on the income of interest inflows.

According to Miller (1977), the value of the firm depends on the relative level of each tax rate, compared with the other two.

Other theories that have been advanced to explain the capital structure of firms include bankruptcy cost, agency theory, and the pecking order theory. These theories are discussed in turn.

Fama and French (1998), analyzing the relationship among taxes, financing decisions, and the firm's value, concluded that the debt does not concede tax benefits. Besides, the high leverage degree generates agency problems among shareholders and creditors that predict negative relationships between leverage and profitability. Therefore, negative information relating debt and profitability obscures the tax benefit of the debt. Booth et al. (2001) developed a study attempting to relate the capital structure of several companies in countries with extremely different financial markets.

They concluded that the variables that affect the choice of the capital structure of the companies are similar, in spite of the great differences presented by the financial markets. Besides, they concluded that profitability has an inverse relationship with debt level and size of the firm. Graham (2000) concluded in his work that big and profitable companies present a low debt rate. Mesquita and Lara (2003) found in their study that the relationship between rates of return and debt indicates a negative relationship for long-term financing. However, they found a positive relationship for short-term financing and equity.

Hadlock and James (2002) concluded that companies prefer loan (debt) financing because they anticipate a higher return. Taub (1975) also found significant positive coefficients for four measures of profitability in a regression of these measures against debt ratio. Petersen and Rajan (1994) identified the same association, but for industries. Baker (1973), who worked with a simultaneous equations model, and Nerlove (1968) also found the same type of association for industries. Roden and Lewellen (1995) found a significant positive association between profitability and total debt as a percentage of the total buyout-financing package in their study on leveraged buyouts. Champion (1999) suggested that the use of leverage was one way to improve the performance of an organization.

In summary, there is no universal theory of the debt-equity choice. Different views have been put forward regarding the financing choice. The present study investigates the effect of capital structure on banks performance.

The problem is compounded in this sub-sector where information asymmetry is rampant. The sector, apart from being a critical component of the financial system, is also regarded as a poverty reduction strategy for developing countries such as Ghana. An investigation therefore into the capital structure of banks and subsequent linkage with their performance is not only appropriate, but a necessity to aid effective policy design and formulation.

CHAPTER FOUR

METHODOLOGY

4.1 THE SCOPE OF THE STUDY

The study examines the effects of capital structure on banks performance in Ghana over the past ten years. The sample selected includes all banks supervised by the country's Central Bank, (Bank of Ghana).

4.2 SAMPLE SIZE AND DATA SOURCES

In all, 14 banks qualified in terms of data availability for this study. The proposed period was from 1998 to 2007. Following (Remmers et al., 1974; Cassar and Holmes, 2003) the key performance (dependent variable) is the Return on Assets (ROA). The explanatory variables include Equity/Total Assets, Loans/Total Assets, Size of Bank, Consumer Price Index(CPI), and Gross Domestic Product(GDP).

4.3 DATA COLLECTION

The data for statistical analysis was mainly secondary data in nature. The information was contained in the annual financial statements of the selected banks and from the quarterly economic bullentin of the banking supervision of the bank of Ghana.

4.4 RESEARCH DESIGN

The research design is aimed at using the multiple regression analysis to determine the correlation between the key performance parameter (ROA) as well as other financial indicators such as Gross Domestic Product, Consumer Price Index etc.

4.5 METHODS OF DATA ANALYSIS

This study uses data from a sample of 14 financial institutions in Ghana. These financial institutions are sampled primarily according to accessibility to data and records. The data is captured from annual financial and income statements and covers a 10 year period, from 1998- 2007. Analysis is carried out within a panel data framework. This is because panel data provides a relatively great number of data points and, therefore, additional degrees of freedom. Panel data model also allows us to construct and test more complicated behavioural models than purely cross section and time series data. We incorporate data from both cross-section and time series variables to reduce the problems associated with omitted variables, since we may not be able to fully specify a capital structure model.

Panel data involves the pooling of hundred and forty (140) observations on a cross-section of time series within a period of ten (10) years and facilitates identification of effects that are simply not detectable in pure cross-sections or pure time-series studies. The panel data framework differs from a regular time-series or cross section regression by the double subscript attached to each variable. The general form of the panel data model can be specified more compactly as:

$$Performance_{i,t} = \alpha + \beta X_{i,t} + \varepsilon_t$$

Where,

Performance measured by ROA is the dependent variable for firm i at time t.

i denotes the individual banks and t denoting time. In this case, i represents the cross- section dimension and t represents the time-series component, α is a scalar, β is a K×1 vector

$X_{i,t}$ is s set of explanatory variables for firm i at time t. and ε_t the error term.

t=1…10 years and i=1 to 14 banks.

4.6 DEPENDENT VARIABLES

The key dependent performance measure in this study is Return on Asset (ROA). An indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings.

This is a measure of the ratio of net profit to total assets. Variables used for the analysis include profitability and leverage ratios. Profitability is operationalized using a commonly used accounting-based measure: the ratio of earnings before interest and taxes (EBIT) to total assets.

The relationship between total asset, and profitability is thus estimated in the following equation:

$$ROA = \frac{EBIT}{Total\ Assets}$$

4.7.0 INDEPENDENT OR EXPLANNORY VARIABLES

As in many studies in the field, we face the problem of choosing an appropriate leverage measure as the dependent variable. Following previous empirical works, we use five classical capital structure measures discussed in depth by Rajan and Zingales (1995). The broader one is the ratio:

$$\frac{Total\ liabilities}{Total\ assets}$$

which is likely to overstate the financial leverage. However, for some firms non-debt items are a very important part of the capital structure. This ratio is often used in the most recent studies (Baker and Wurgler, 2002; Fama and French, 2002; Kayhan and Titman, 2007). We also use the more traditional measure of leverage:

$$\frac{Long\text{-}term\ debt + Short\text{-}term\ debt}{Total\ assets}$$

and in order to shed some light over the difference between long- and short-term debt determinants we also consider the two following measures of leverage:

$$\frac{\text{Long-term debt}}{\text{Total assets}}$$

and

$$\frac{\text{Short-term debt}}{\text{Total assets}}$$

which probably best represents the effects of past financial decision (Rajan and Zingales, 1995).

4.7.1 EQUITY TO TOTAL ASSETS

With regards to other independent variables, we employ Equity to Total asset (Equity/TA), which is a measure of the proportion of the total funds provided by shareholders to finance total asset. To make up for other omitted variables we employ, bank size, consumer price index and gross domestic product as control variables.

4.7.2 SIZE OF BANK

Larger firms tend to be more diversified and are therefore able to absorb risk (Rajan & Zingales, 1995). In addition, they tend to have easy access to credit and have more diluted ownership, leading to less control over managerial decisions. Friend and Lang (1988) find that, though, managers may influence debt ratios in order to protect their personal investment in a company, a firm's debt maturity choice is less dependent on size. In this study we use the natural log of total assets as a measure of size.

4.7.3 CONSUMER PRICE INDEX

A consumer price index (CPI) is a measure estimating the average price of consumer goods and services purchased by households. A consumer price index measures a price change for a constant market basket of goods and services from one period to the next within the same area (city, region, or nation). Hence it is an inflationary indicator that measures the change in the cost of a fixed basket of products and services, including housing, electricity, food, and transportation.

4.7.4 GROSS DOMESTIC PRODUCT

The gross domestic product (GDP) is a basic measure of a country's economic performance, and is the market value of all final goods and services made within the borders of a nation in a year. The monetary value of all the finished goods and services produced within a country's borders in a specific time period, though GDP is usually calculated on an annual basis. It includes all of private and public consumption, government outlays, investments and exports less imports that occur within a defined territory

4.8 MODEL SPECIFICATION

The key performance measure of banks considers in this study, ie return on asset (ROA) would be represented with independent variables described below.

The model for this study follows the one used by Abor (2005) to explain the relationship between capital structure and profitability, because the model presents itself as the most appropriate, for the purposes of this study which takes this form:

$$ROA_{i,t} = \alpha + \beta Equity/TA_{i,t} + \phi GDPg_t + \theta CPI_t + \varpi Size\ of\ Bank_{i,t} + \varepsilon_t \qquad (1)$$

$$ROA_{i,t} = \delta + \lambda Debt/TA_{i,t} + \chi GDPg_t + \varphi CPI_t + \vartheta Size\ of\ Bank_{i,t} + \varepsilon_t \qquad (2)$$

where

$ROA_{i,t}$ is EBIT divided by Total asset and it represents the performance measure for bank í at time t.

$Equity/TA_{i,t}$ is the total of shareholders's fund divided by the Total assets of bank í at time t;

$GDPg_t$ is Gross domestic product growth measures the size of the market annually for banks at time t;

CPI_t represents the consumer price index which is an indicator of inflation for banks at time t;

Debt/TA is leverage measuring total debt divided by total asset for bank í in time t;

Size of Bank measures the size of the bank and is a natural log of asset base of bank í at time t; and $\square_t$ is the term error.

CHAPTER FIVE

FINDINGS, ANALYSIS AND RESULTS

5.0 INTRODUCTION

This chapter introduces the data extracted from the financial and income statements of the banks collated from the Central Bank of Ghana and analyses it through the use of the panel data framework as discussed in the previous chapter.

5.1.0 EMPIRICAL RESULTS

Table 1 below provides a summary of the descriptive statistics of the individual banks as against the descriptive statistics of the interbanks. This shows the average indicators of the variables computed from the financial statements.

Table 1

5.1.1 DESCRIPTIVE STATISTICS FOR INTERBANKS

DEPENDENT VARIABLE: RETURN ON ASSETS					
Ordinary Least Squares (OLS) Estimation					
Variables	Obs.	Mean	Std. Dev.	Minimum	Maximum
ROA	140	0.0449	0.0382	-0.15	0.23
EQUITY/TA	140	0.123	0.0716	-0.15	0.43
DEBT/TA	140	0.0710	0.0759	0.001	0.343
CPI	140	0.2294	0.1033	0.118	0.466
GDP	140	0.0448	0.0046	0.037	0.0524
SIZE	140	3.0428	3.1279	1.4758	3.7701

5.1.2 RETURN ON ASSET (ROA)

The rate of return, measured by return on assets (ROA) reveals an average of 4.5 per cent. This measure the contribution of per cedi spent on assets to generate profit. The 4.5 per cent shows the poor performance on the use of assets to generate profits by banks in Ghana. It could also mean that the ability of banks to generate profits in Ghana is not strongly influenced by their total assets within the period under review.

5.1.3 EQUITY TO TOTAL ASSETS (EQUITY/TA)

The equity-total assts ratio measures the ratio of equity to total assets. This represents the proportion of total assets financed by equity. The mean of this ratio is 12.3 per cent. The implies that 12.3 per cent of the total assets of banks in Ghana is financed by the shareholders' equity.

5.1.4 DEBT TO TOTAL ASSETS

The debt-total assets ratio measures the proportion of total assets financed by debts. The mean of this ratio is 7.1 per cent. This means that 7.1 per cent of the total assets of banks in Ghana are financed by loans. Since total assets are used to generate profits, the low percentage of debt to total assets means the loans or debts may impact on profitability of banks in Ghana.

5.1.5 CONSUMER PRICE INDEX

The consumer price index (CPI) has an average of 22.9 per cent during the period under review. This means that during the period under study, the average inflation rate is 22.9 per cent. This is quite high. Since the interest charged by banks on loans and other advances they

grant to their clients to some extent depends on inflation, a high inflation enables banks to charge high interest rate which results in high profits for banks.

5.1.6 GROSS DOMESTIC PRODUCTS (GROWTH)

The mean of growth rate of real GDP is 4.5 per cent. This means that on the average, the real GDP grows by 4.5 per cent during the period of study. The growth rate of real GDP measures the market size. A high growth rate means that the market is very rapidly expanding enabling banks in the country to grant more loans and advances to customers and making more profits. A low growth rate means that the market is not expanding very much limiting the amount of loans banks can grant their customers to make more profits. The average growth rate of 4.5 during the period under review is quite low compared to the 2008 growth rate of 7.3 per cent. The implication is that GDP growth rate may not be significant in influencing profitability of banks in Ghana.

5.2 DESCRIPTIVE STATISTICS OF INDIVIDUAL BANKS

We attempt to measure the characteristics of the individual banks in terms of return on asset (ROA), debt to total asset, equity to total asset and the size of the bank against the interbanks averages that is the mean of the banks put together.

DESCRIPTIVE STATISTICS FOR INDIVIDUAL BANKS

Table 2

DESCRIPTIVE STATISTICS OF AGRICULTURE DEVELOPMENT BANK (ADB)						
VARIABLES	MEAN	MEDIAN	SD.	MIN.	MAX	PROB.
ROA	0.048500	0.042500	0.018567	0.020000	0.080000	0.807993
DEBT/TA	0.113400	0.114000	0.024518	0.076000	0.138000	0.640346
EQUITY/TA	0.172000	0.180000	0.041846	0.080000	0.230000	0.500052
CPI	0.229300	0.214000	0.108607	0.118000	0.466000	0.442344
LOG(SIZE)	3.269801	3.275338	0.207242	2.839345	3.535513	0.728683
GDP	0.044790	0.044700	0.004869	0.080000	0.052400	0.860219

For the Agricultural Development Bank (ADB), the mean of ROA is 0.0485 or 5%. This means that every cedi spent on the total assets contribute 5% to the profitability of the bank. This is more than the average of the interbanks in Ghana which is 4.4 %.thus ADB is doing well in terms of using its assets to generate profits as far as Ghana is concerned. The mean of debt to total asset ratio for ADB is 0.1134 or 11%. This means debt finances 11% of the asset of the bank. This is higher than the national average of the banks which is 7.1%. the equity to total debt which measures proportion of total assets financed from equity is 17.2% higher than national average of banks of 12.3%. the size of the ADB is 3.22698 slightly higher than the national average of 3.043.

Table 3

DESCRIPTIVE STATISTICS OF BARCLAYS BANK GHANA (BBG)						
VARIABLES	MEAN	MEDIAN	SD.	MIN.	MAX.	PROB.
ROA	0.060740	0.061700	0.008407	0.049000	0.070000	0.574525
DEBT/TA	0.141500	0.122500	0.033616	0.103000	0.185000	0.489568
EQUITY/TA	0.102000	0.100000	0.015492	0.080000	0.130000	0.760533
CPI	0.229300	0.214000	0.108607	0.118000	0.466000	0.442344
LOG(SIZE)	3.499067	3.397060	0.906893	2.536854	5.813946	0.024788
GDP	0.044790	0.044700	0.004869	0.037000	0.052400	0.860219

For Barclays bank Ghana limited (BBG) , the ROA is 6%, higher than the average of the banks of 4.4%. the equity to total asset is 10% less than interbank average of 12.3%, the debt to total asset for the bank is 14% far higher than the national average of 7%. The size of BBG is 3.4991 higher than the interbank average of 3.0428.

Table 4

DESCRIPTIVE STATISTICS OF ECOBANK GHANA (ECG)						
VARIABLES	MEAN	MEDIAN	SD.	MIN.	MAX	PROB.
ROA	0.039100	0.040000	0.013486	0.012000	0.065000	0.875425
DEBT/TA	0.055200	0.055000	0.017048	0.038000	0.082000	0.615131
EQUITY/TA	0.085000	0.080000	0.031358	0.030000	0.150000	0.839536
CPI	0.229300	0.214000	0.108607	0.118000	0.466000	0.442344
LOG(SIZE)	3.342489	3.317483	0.333366	2.785423	3.793318	0.770954
GDP	0.044790	0.044700	0.004869	0.037000	0.052400	0.860219

Ecobank Ghana limited (ECB) has mean of ROA of 4%, debt to total assets of 5.5%, equity to total asset of 8.5% which are less with interbank average of 4.5%, 7%, and 12.3% respectively. The size of ECB of 3.343 is however higher that of interbank of 3.043.

The mean of the ROA is 0.024205 meaning that every cedi spent on assets of the bank generates a about 2.4 per cent of the profit of the bank. This is far too law. The mean of the debt to assets ratio of 0.013400 means that only 1.3 per cent of the total assets are financed from debt. In the case of equity to total assets ratio, equity finances 7.6 per cent of the total assets.

Table 5

DESCRIPTIVE STATISTICS OF GHANA COMMERCIAL BANK (GCB)						
VARIABLES	MEAN	MEDIAN	SD.	MIN.	MAX.	PROB.
ROA	0.040509	0.040000	0.014900	0.020000	0.061700	0.708512
DEBT/TA	0.206600	0.180500	0.057828	0.161000	0.343000	0.109940
EQUITY/TA	0.110000	0.110000	0.018856	0.090000	0.150000	0.638508
CPI	0.229300	0.214000	0.108607	0.118000	0.466000	0.442344
LOG(SIZE)	3.667602	3.623714	0.832621	2.906335	5.848916	0.007457
GDP	0.044790	0.044700	0.004869	0.037000	0.052400	0.860219

The Ghana Commercial Bank (GCB) has ROA of 4%, debt to total assets of 20.6%, equity to total assets of 11% and size of 3.6626. the ROA is less than interbank average of 4.5% and equity to total assets is less than the interbank average of 12.3% whilst debt to total asset and the size are more than the interbank average of 7% and 3.04% respectively.

Table 6

DESCRIPTIVE STATISTICS FOR STANDARD CHARTERED BANK (SCB)

VARIABLES	MEAN	MEDIAN	SD.	MIN.	MAX.	PROB.
ROA	0.05400	0.05000	0.01430	0.04000	0.08000	0.5623
DEBT/TA	0.2198	0.2225	0.06933	0.1360	0.2870	0.4609
EQUITY/TA	0.09900	0.09500	0.02601	0.06000	0.1400	0.7758
CPI	0.2299	0.2140	0.1081	0.1180	0.4660	0.4384
LOG(SIZE)	4.1844	3.6132	1.1181	3.2115	5.9607	0.4135
GDP	0.04479	0.04470	0.004869	0.03700	0.05240	0.8602

Standard Chartered Bank (SCB) has ROA 5.4%, Size 4.184442, Debt/TA 22%, Equity/TA 10%. These characteristics are mixed compared to IBA of ROA 4.5%, Size 3.042778, Debt/TA 7% and Equity/TA 12.3%.

Table 7

DESCRIPTIVE STATISTICS FOR SC-SSB						
VARIABLES	MEAN	MEDIAN	SD.	MIN.	MAX.	PROB.
ROA	0.05344	0.05620	0.01513	0.03000	0.06900	0.5595
DEBT/TA	0.0943	0.1030	0.01618	0.06700	0.1080	0.5198
EQUITY/TA	0.1520	0.1500	0.01814	0.1200	0.1900	0.8062
CPI	0.2293	0.2140	0.1086	0.1180	0.4660	0.4423
LOG(SIZE)	3.9560	3.3537	1.2048	2.8798	5.7865	0.4170
GDP	0.04479	0.04479	0.004869	0.03700	0.05240	0.8602

SG-SSB has ROA 5.3%, Size 3.955951, Debt/TA 9.4%, Equity/TA 15.2%. These characteristics are higher than the inter-bank (IBA) averages of ROA 4.5%, Size 3.042778, Debt/TA 7% and Equity/TA 12.3%.

The individual descriptive statistics for The Trust Bank, Merchant Bank, National Investment Bank, Prudential Bank, Cal Bank and International Commercial Bank are outlined below and their descriptive statistics are shown per Appendix C.

THE TRUST BANK

The Trust Bank (TTB) has ROA 4%, Size 2.608635, Debt/TA 2%, and Equity/TA 10%. These characteristics are less than the Interbank averages (IBA). This implies that management must take pragmatic measures to improve the performance of the bank at least in the areas that are mentioned.

The mean of ROA is 0.073000 meaning that every cedi spent on assets of the bank generates about 7.3 per cent of the profits. This is far higher than the interbank average. The mean of the debt to total assets ratio is 0.039500 meaning that approximately 4 per cent of the total assests is financed from debts. This is less than the interbank average of 7.1 per cent. The equity to total assests ratio is 0.192000 meaning that more than 19 per cent of the total assests is financed from equity. The mean of the size stands at 2.77331 less than the interbank average.

MERCHANT BANK GHANA LIMITED

Merchant Bank Ghana limited (MBG) has ROA of 5.6% higher than the interbank of 3.04%. the debt to total assets of MBG is 5% less than the interbank of 7% and equity to total of 14.3% higher the interbanks average of 12.3%.

THE NATIONAL INVESTMENT BANK

The National Investment Bank (NIB) has ROA of 7%, Size 2.773331, Debt/TA 4%, Equity/TA 19% compared to the inter-bank (IBA) average of 4.5 %,3.042778, 7%, 12.3% respectively. NIB has higher ROA and Equity/TA and less Size and Debt/TA compared with IBA.

PRUDENTIAL BANK LIMITED

Prudential Bank Limited (PBL) has ROA 4%, Size 2.595043, Debt/TA 1.4%, Equity/TA 5.7%. These are less than IBA of ROA 4.5%, Size 3.042778, Debt/TA 7% and Equity/TA 12.3%. This implies that PBL is under performing in terms of the areas stated. The management ought to be proactive measures to at least achieve the interbank averages.

CAL BANK

The CAL Bank has mean of ROA of 3.7 % less than interbank average of 4.4%. the equity to total for CAL bank is 10.2% less than inter-bank average of 12.3%. the debt to total asset and the size of CAL are 2% and 2.6% less in both cases than the interbanks average of 7% and 3.04% respectively.

In sum The Trust Bank (TTB), Prudential bank limited (PBL), Ecobank bank Ghana (ECB) and CAL bank has characteristics in terms of ROA, Size, Debt/TA, Equity/TA less than that of interbank average (IBA). Agricultural development bank (ADB), Barclays bank Ghana (BBG), and SG-SSB, have characteristics higher than that of interbank average (IBA). However, Standard chartered bank (SCB), Merchant bank Ghana (MBG), National investment bank (NIB), and Ghana commercial bank (GCB) have mixed characteristics. In sum, they have higher results whilst in others they have less result.

4.2 REGRESSION ANALYSIS

The regression analysis is used to investigate the relationship between the capital structure of banks in Ghana and profitability measured by ROA. The Ordinary Least Squares (OLS) regression results are presented in model I and II below.

In the regression, we set out to find out the effects of total debts and shareholders' equity have on the performance of banks measured by return on assets (ROA) which is the dependent variable. Our main explanatory variables are Debt to total assets (Debt/TA) ratio and Equity to total assets (E/TA). Besides, there are other control variables such as consumer price index (CPI) which measures the inflation, size of banks measured by log of total assets and size of markets measured by growth rate of real GDP. The results of the regression from the Ordinary Least Squares (OLS) are presented in models 1 and 2.

REGRESSION RESULTS

MODEL 1

DEPENDENT VARIABLE : RETURN ON ASSETS (ROA)				
Ordinary Least Squares(OLS) Estimation (MODEL 1)				
Explanatory Variables	Coefficient	Std. Error	t-Statistics	Prob.
Size of Bank	-0.0678	0.0877	-0.7730	0.4409
Size of Market (GDP growth)	0.1337	0.6731	0.1987	0.8428
Debt/TA	0.1556	0.0700	2.2215	0.0281
Inflation (CPI)	0.394175	0.154644	2.548919	0.0120
Constant	-1.494043	2.315912	-0.645121	0.5200
Number of Observations	140			
R –Squared	0.7745			
F-statistic	11.19579			
Prob(F-statistic)	0.000000			

From model 1, the Debt/TA is positively correlated with performance. The coefficient of Debt/TA is statistically significant at 95% confidence level. This implies that the total debt of a bank has positively strong effect on its performance. Thus, increasing the debts of banks shall increase its performance. Thus, a bank can increase performance by borrowing more money.

MODEL 2

DEPENDENT VARIABLE : RETURN ON ASSETS				
Ordinary Least Squares(OLS) Estimation (MODEL 2)				
Explanatory Variables	Coefficient	Std. Error	t-Statistic	Prob.
Size of Bank	0.058838	0.071060	0.828001	0.4092
Size of Market (GDP growth)	0.275611	0.653179	0.421954	0.6738
Equity/TA	0.443640	0.120533	3.680645	0.0003
Inflation (CPI)	0.374780	0.148194	2.528979	0.0126
Constant	-1.02147	2.243134	-0.455377	0.6496
Number of Observations	140			
R –Squared	0.6638			
F-statistic	13.57629			
Prob(F-statistic)	0.000000			

In model 2, we see the effects of equity on the performance of banks. The table shows that not only has equity positive effects on performance, but also, that its coefficient is statistically significant. Thus, increasing equity of banks in Ghana will substantially increase banks performance.

The control variables- real GDP and CPI- have positive relationship with performance. The CPI has statistically significant effect on performance. Thus, the higher the rate of inflation, the higher the performance of the banks in Ghana. This may be due to higher interest rates charge on loans and advances they give to their clients when inflation rate is high. The real GDP is however not significant statistically in influencing banks performance in Ghana. Thus, a higher real GDP growth will affect banks' performance.

However, size has negative effect on performance. This is in respect of the fact that it is added to Debt/TA ratio in explaining banks performance. The size has positive relationship with performance when used with equity. The R^2 of 0.775 implies that the explanatory variables explain more than 77% of the dependent variables. The F-statistic of 11.19579(Prob F-Stats= 0.000000) implies that the explanatory variables are jointly significant at 99% confidence interval or 1% significant level in explaining the dependent variables.

In model 2, we see the effects of equity on the performance of banks. The table shows that not only has equity positive effects on performance, but also, that its coefficient is statistically significant. Thus, increasing equity of banks in Ghana will substantially increase performance. The control variables, CPI, Size, and real GDP growth have positive relationship with performance. Out of the three, CPI is statistically significant in influencing the performance of banks in Ghana. The higher the rate of inflation, the higher the performance of banks. The other control variables, size and real GDP are not significant. The

F-statistic of 13.57629(Prob F-Stats= 0.000000) indicates that the explanatory variables are jointly significant at 99 confidence interval in explaining the dependent variable (ROA). The R^2 of 0.663 indicates that the independent variables explain 66% of the explanatory variables.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.0 INTRODUCTION

After the seminal paper by Modigliani and Miller in 1958 and the subsequent revision of their initial position, several studies have shown that capital structure influences performance of corporate entities. As a developing and a critical sector especially as a development tool, an understanding of the linkage between capital structure and banks' performance is not only an appropriate addition to the ongoing debate for effective policy formulation, but also crucial for management decision making. The main contribution of this study is its bold attempt to examine fourteen (14) banks within the banking sector in Ghana. This study builds on Abor (2005) and Abor and Biekpe (2005) in developing a framework for analysing financing and capital structure decisions facing Ghanaian firms. Again this study develops on further works by Amidu (2007) on capital structure of banks in Ghana. A linkage is also made by Kyereboah-Coleman (2007) in analysing the impact of capital structure on the performance of microfinance institutions in Ghana. This study examines the effect of capital structure on banks performance in Ghana.

The study thus explored this linkage using panel data from Ghana on 14 financial institutions covering the ten-year period 1998-2007. The results show that most financial institutions are use both equity and debt in measuring the performance of banks, however equity tends to be more statistically significance than debt.

6.1 SUMMARY OF FINDINGS

From the descriptive statistics, the rate of return, measured by return on assets (ROA) reveals an average of 4.5 per cent. This measures the contribution of per cedi spent on assets to generate profit. The 4.5 per cent shows the poor performance on the use of assets to generate profits by banks in Ghana. The equity-total assts ratio measures the ratio of equity to total assets. This represents the proportion of total assets financed by equity. The mean of this ratio is 12.3 per cent. This implies that 12.3 per cent of the total assets of banks in Ghana is financed by the shareholders' equity. The debt-total assets ratio measures the proportion of total assets financed by debts. The mean of this ratio is 7.1 per cent. This means that 7.1 per cent of the total assets of banks in Ghana are financed by loans.

The statistical significance of results of the financial variables in the model specification underscores the effect of those variables on banks performance. The study has also highlighted the importance of distinguishing between equity and debt when making inferences about capital structure. The results also show that debt to total asset is positively correlated with performance. The coefficient of debt to total asset is significant at 95% confidence internal or 5% significant level. Again, the results reveal that equity correlates not only positive to banks performance but also its coefficient is statistically significant. Thus increasing the equity of banks in Ghana will substantially increase banks performance.

The control variables, consumer price index, size of bank and real gross domestic product qrowth all have positive relationship with performance of banks in Ghana. Thus, the higher the rate of inflation, the higher the performance of banks. The other control variables size of the bank and real gross domestic product are not significant.

6.2 CONCLUSION

In this study we set to investigate the effects of debt and equity on banks performance and which of the two influences the performance of banks more. Ordinary least squares was used to estimate the parameters of the models. The results show that both debts and equity have strong influence on banks performance. However equity to total assets has stronger effect on banks performance than debt to total assets.

The study again reveals that consumer price index also has a strong effect on the performance of banks.

However, other control variables such as size of bank and gross domestic product have no strong effect on banks performance.

6.3 RECOMMENDATIONS FOR FURTHER STUDIES

The following recommendations are made based on the study of the effect of capital structure on banks performance.

The regression results review that apart from equity to total assets and debt to total assets there are other control variables which have effect on banks performance, some of which are significant and others insignificant. It would be therefore be useful to consider the following directions for future research:

- . how does consumer price index influence the performance of banks in Ghana.

  The study shows that consumer price index which has hitherto been ignored by researchers in analysing banks performance should be considered. This is because the study reveals that the consumer price index has strong positive effect on performance of banks.

- . the relationship between banks size, real gross domestic product on one hand and capital structure on the other.

6.4 RECOMMENDATIONS FOR BANKERS

The findings of this study reveal that both debt and equity have significant effects on banks profitability. Thus increasing debt and equity will enhance banks performance leading to higher profitability. The policy implication which may be deduced from the findings is that banks should be guided by the fact that increasing equity and debt will enhance corporate performance.

The findings also reveal that the ability of the assets to generate returns is quite low for Ghanaian banks. This should really prompt management of banks to be proactive and innovative in the use or application of assets in generating higher returns.

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ABBREVIATIONS USED IN THE STUDY

1. ADB   Agricultural Development Bank

2. GCB   Ghana Commercial Bank

3. BBG   Barclays Bank Ghana Limited

4. ECB   Ecobank Bank Limited

5. FAMBL   First Atlantic Merchant Bank Limited

6. MBG   Merchant Bank Ghana Limited

7. NIB   National Investment Bank

8. SCB   Standard Chartered Bank

9. PBL   Prudential Bank Limited

10. TTB   The Trust Bank

11. ICB   International Commercial Bank

12. CAL   CAL Bank

13. D/TA   Debts divided by Total Assets

14. E/TA   Equity divided by Total Assets

15. CPI   Consumer Price Index

16. GDP   Gross Domestic Products

17. IBA   Inter-banks Averages

18. SMEs   Small and Medium Enterprises

19. EBIT   Earnings Before Interest and Taxes

APPENDIX B: SUMMARY DESCRIPTIVE STATISTICS

SUMMARY OF DESCRIPTIVE STATISTICS						
VARIABLES		OBS.	MEAN	STD. DEV	MIN.	MAX.
ROA	Overall	140	.0448946	.0381776	-.15	.23
	Between			.036849	.024205	.18
	Within			.0346536	.1331054	.2192946
EQUITY/TA	Overall	140	.123	.0715974	-.15	.43
	Between			.0562541	.05	.239
	Within			.0492607	-.077	.314
DEBTS/TA	Overall	140	.0710143	.0759463	.001	.343
	Between			.071517	.0032	.2198
	Within			.026563	-.0127857	.2074143
CPI	Overall	140	.2293857	.1033419	.118	.466
	Between			.0619529	.203	.466
	Within			.1011516	.1174857	.4660857
GDP	Overall	140	.04479	.0046353	.037	.0524
	Between			.0012017	.0402	.0453
	Within			.0046171	.03649	.0524
BANK SIZE	Overall	140	1103.516	1342.355	29.91	5890.2
	Between			958.2667	121.079	3106.09
	Within			968.8419	-1295.574	3887.627

APPENDIX C: INDIVIDUAL DESCRIPTIVE STATISTICS

Table 9

VARIABLES	MEAN	MEDIAN	SD.	MIN.	MAX.	PROB.
DESCRIPTIVE STATISTICS FOR CAL BANK						
ROA	0.037170	0.040000	0.015579	0.013200	0.060000	0.794253
DEBT/TA	0.020400	0.018500	0.005125	0.015000	0.027000	0.507891
EQUITY/TA	0.146000	0.145000	0.032387	0.090000	0.200000	0.940346
CPI	0.229900	0.214000	0.108149	0.118000	0.466000	0.438423
LOG(SIZE)	2.641292	2.690588	0.302222	2.196701	2.994660	0.623546
GDP	0.044790	0.044700	0.004869	0.037000	0.052400	0.860219

Table 10

DESCRIPTIVE STATISTICS FOR FIRST ATLANTIC MERCHANT BANK (FAMBL)						
VARIABLES	MEAN	MEDIAN	SD.	MIN.	MAX.	PROB.
ROA	0.024205	0.010000	0.037582	0.004050	0.130000	0.000036
DEBT/TA	0.013400	0.010000	0.005777	0.007000	0.025000	1.238275
EQUITY/TA	0.076000	0.070000	0.018379	0.060000	0.120000	4.067880
CPI	0.229300	0.214000	0.108607	0.118000	0.466000	0.442344
LOG(SIZE)	2.539964	2.536584	0.353092	1.994348	2.992607	0.678660
GDP	0.044790	0.044700	0.004869	0.037000	0.052400	0.860219
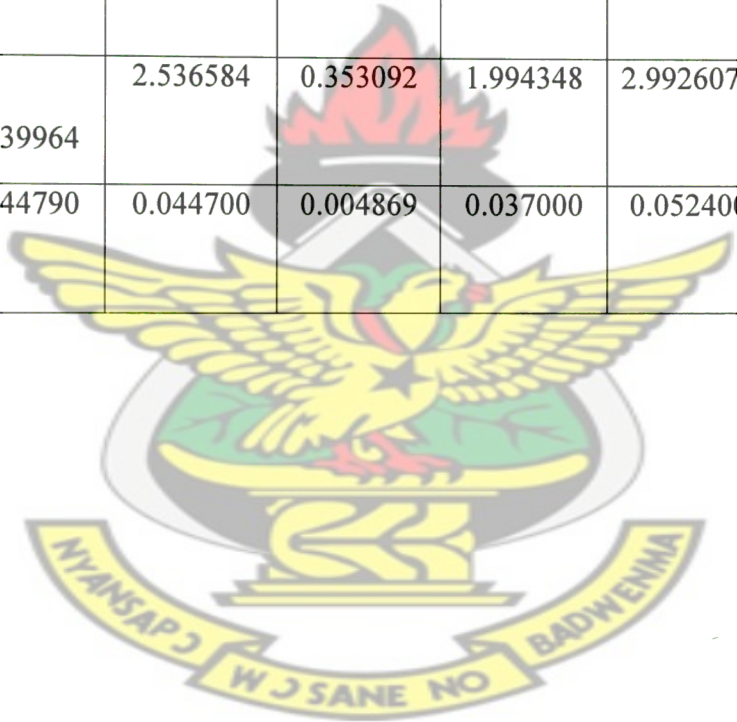
Table 10

DESCRIPTIVE STATISTICS FOR THE TRUST BANK (TTB)						
VARIABLES	MEAN	MEDIAN	SD.	MIN.	MAX.	PROB.
ROA	0.03916	0.04000	0.009768	0.02730	0.05430	0.6444
DEBT/TA	0.01660	0.01700	0.006620	0.002000	0.02800	0.5678
EQUITY/TA	0.09900	0.08500	0.04725	0.03000	0.2100	0.2189
CPI	0.2293	0.2140	0.10861	0.1180	0.4660	0.4423
LOG(SIZE)	2.6086	2.5894	0.2696	2.1424	2.9923	0.8337
GDP	0.04479	0.04470	0.004869	0.03700	0.05240	0.8602
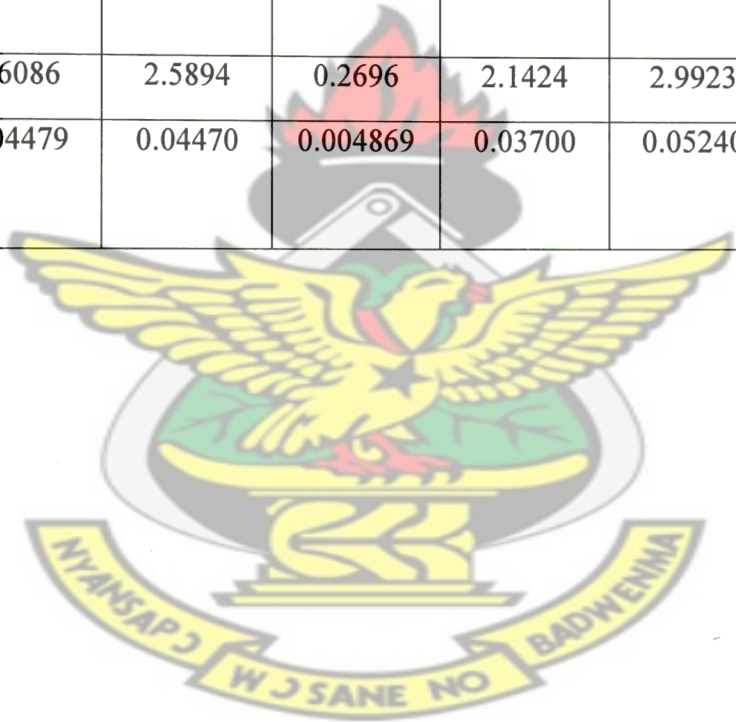
Table 11

DESCRIPTIVE STATISTICS FOR MERCHANT BANK GHANA (MBG)						
VARIABLES	MEAN	MEDIAN	SD.	MIN.	MAX	PROB.
ROA	0.055600	0.035000	0.063948	0.020000	0.2300	0.000517
DEBT/TA	0.049600	0.050000	0.009663	0.03700	0.07100	0.4643
EQUITY/TA	0.143000	0.140000	0.021628	0.1100	0.1700	0.6514
CPI	0.229300	0.214000	0.108607	0.1180	0.4660	0.4423
LOG(SIZE)	2.917196	2.890783	0.200188	2.5983	3.2896	0.8750
GDP	0.044790	0.044700	0.004869	0.03700	0.05240	0.8602
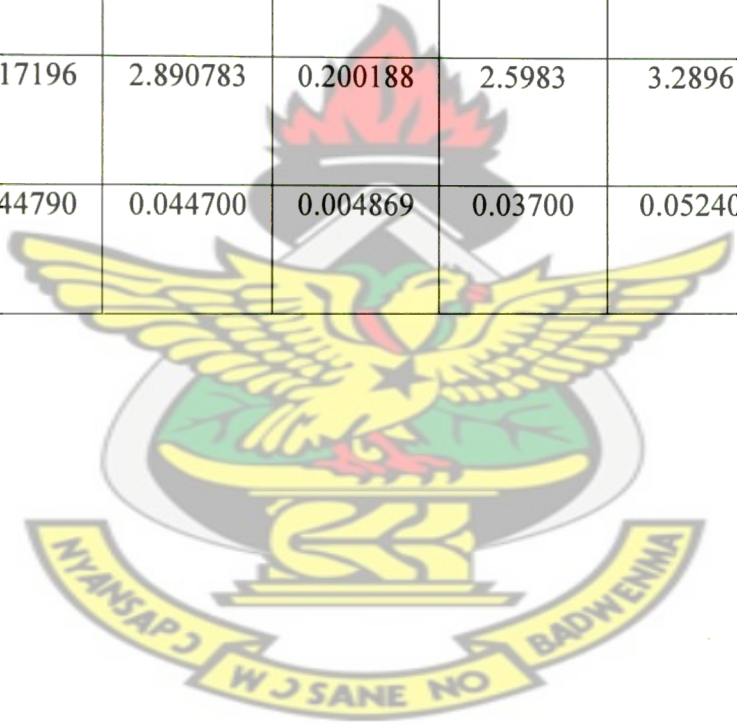
Table 12

DESCRIPTIVE STATISTICS FOR PRUDENTIAL BANK LIMITED (PBL)						
VARIABLES	MEAN	MEDIAN	SD.	MIN.	MAX.	PROB.
ROA	0.03610	0.02000	0.02698	0.02000	0.09100	0.2228
DEBT/TA	0.01430	0.01000	0.008407	0.007000	0.03000	0.4891
EQUITY/TA	0.05700	0.06000	0.01338	0.03000	0.08000	0.91135
CPI	0.2293	0.2140	0.1086	0.1180	0.4660	0.4423
LOG(SIZE)	2.5950	2.7495	0.4152	1.7854	3.006539	0.4962
GDP	0.04479	0.04470	0.004869	0.03700	0.05240	0.8602

Table 13

DESCRIPTIVE STATISTICS FOR NATIONAL INVESTMENT BANK (NIB)						
VARIABLES	MEAN	MEDIAN	SD.	MIN.	MAX.	PROB.
ROA	0.07300	0.05000	0.05314	0.03000	0.1800	0.3714
DEBT/TA	0.03950	0.03400	0.01387	0.02600	0.07000	0.2685
EQUITY/TA	0.1920	0.1900	0.06391	0.1200	0.3100	0.6858
CPI	0.2293	0.2140	0.1086	0.1180	0.4660	0.4423
LOG(SIZE)	2.7733	2.8120	0.3357	2.3197	3.2790	0.6635
GDP	0.04479	0.04470	0.004869	0.03700	0.05240	0.8602