

UNIVERSITY OF EDUCATION, WINNEBA

**EFFECTS OF CAPITAL STRUCTURE ON THE FINANCIAL
PERFORMANCE OF LISTED BANKS IN GHANA**



2022

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PERFORMANCE OF LISTED BANKS IN GHANA**



**A dissertation in the Department of Applied Finance and Policy Management,
School of Business, submitted to the School of
Graduate Studies in partial fulfillment
of the requirements for the award of the degree of**

**Master of Business Administration
(Finance)
in the University of Education, Winneba**

NOVEMBER, 2022

DECLARATION

Student's Declaration

I, **ERIC AMPONSAH**, declare that this thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

SIGNATURE:

DATE:

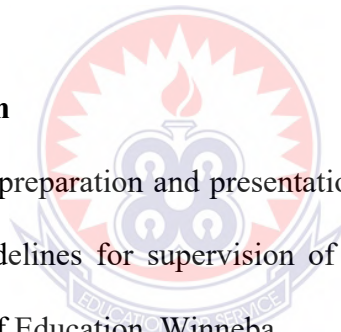
Supervisor's Declaration

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of thesis/dissertation/project as laid down by the University of Education, Winneba.

SUPERVISOR: DR. EMMANUEL OKOFO-DARTEY

SIGNATURE:

DATE:



DEDICATION

This work is dedicated to my father, Mr. Andrews Amponsah, for his support, encouragement, and his love



ACKNOWLEDGMENTS

I express my sincere gratitude to my supervisor, Dr. Emmanuel Okofo-Dartey for his professionalism and patiently guiding me through every step of this research work.

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ABSTRACT

This study examines the effect of capital structure (measures as short-term debt ratio, long term debt ratio, and total debt ratio) on financial performance (measured by Return on Assets and Return on equity) of listed banks in Ghana. The study considered all the nine (9) listed banks in Ghana over a 11-year period (2010-2020) while secondary data was extracted from the annual report of the banks. A dynamic panel approach of difference Generalized Method of Moments was used to analyze the data of the study.

The regression analysis revealed short term debt ratio, long-term debt ratio and total debt ratio all have statistically negatively relationship with Return of Equity (profitability) of banks in Ghana. The result suggests that an increase in any of short-term debt, long-term debt or total debt of their capital structure would lead to a reduction of the profitability of banks in Ghana. On the macroeconomic variables the study found inflation and exchange rate to have statistically positive and negative relationship respectively; with financial performance of listed banks in Ghana.

The results call for management of banks to have an efficient and effective credit policy that improves the performance level and credit policy should contain upper and lower limits of taking credit or debt to reduce finance cost. As high finance cost would adversely affect their financial performance, managers must always be alert on the level of debt to equity so as not to affect profitability negatively.



CHAPTER ONE

INTRODUCTION

1.0 Introduction

Capital structure has in recent times attracted a lot of debate and academic attention across industries in the corporate finance literature and continues to engage the attention of researchers. The importance aspect of the subject matter is from the fact that capital structure affects the profitability of corporate entities irrespective of their industry. Capital structure generally refers to the specific mixture of debt and equity used to finance a company's assets and operations. The study by Modigliani and Miller (1963) provides a starting point for thinking about the strategic use of debt and gives an indication that managers cannot change the value of the firm by changing the capital structure of that firm.

Frank and Goyal (2013), suggested that in order for firms to achieve the objective regarding optimal capital structure which in turn would minimize its cost of capital firm's management should take rational financing decisions. The mixture of debt and equity that will achieve the above objective is the optimal capital structure. Optimum capital structure involves a tradeoff between the benefits of higher leverage, which include the tax deductibility of interest and cost of higher leverage, which includes higher risk for all capital providers. Getzmann, Lang and Spremann (2010), indicated that factors such as tangible assets, size profitability and growth opportunities influence capital structure decisions.

Therefore, this study, adding to literature, this study seeks to examine what effect capital structure has on the financial performance of listed banks in Ghana. With the above introduction given, the study proceeds to the background of the study, problem

statement, research aim, objectives and questions, the significance of this study, and finally the scope as well as the structure of the study.

1.1 Background of the Study

The capital structure of companies has been a major finance issue in academia and in the corporate world. Over the years three major theories of capital structure emerged which diverge from the assumption of perfect capital markets under which the “irrelevance model” is working. The first is the trade-off theory (Kraus & Litzenberger, 1973) which assumes that firms trade off the benefits and costs of debt and equity financing and find an “optimal” capital structure after accounting for market imperfections such as taxes, bankruptcy costs, and agency costs. The second is the pecking order theory (Myers & Majluf, 1984) which argues that firms follow a financing hierarchy to minimize the problem of information asymmetry between the firm’s managers-insiders and the outsiders’ shareholders.

Recently, Baker and Wurgler (2002), have suggested a new theory of capital structure called the “Market timing theory of capital structure”. This theory states that the current capital structure is the cumulative outcome of past attempts to time the equity market. Market timing implies that firms issue new shares when they perceive they are overvalued and that firms repurchase their shares when they consider them to be undervalued. Market timing issuing behavior has been well established empirically by others already, but Baker and Wurgler (2002) show that the influence of market timing on capital structure is highly persistent.

The major theories of the capital structure issue have also recognized the benefits of financial leverage in firm financing while avoiding the cost of financial distress. For the current study three dominant theoretical models within which other theories are

embedded are reviewed and infused into the model of the study. These are the value irrelevance proposition by Modigliani and Miller (1958), the pecking order model Myers and Majluf (1984) and the traditional trade-off theory by Kraus and Litzenberger (1973).

According to Ross et al (2011), the static trade-off theory indicates that firms borrow up to the point where the tax benefit from an extra dollar in debt is exactly equal to the cost that comes from increased profitability of financial distress. The pecking order theory concluded that the total amount of debt in the capital structure of companies will reflect the firms' cumulative need for external funds. The free cash flow theory, according to Naizuli (2011), on the other hand, expatiated that extremely high debt levels would increase firm value despite the threat of financial distress when a firm's operating cash flow significantly surpasses its profitable investment opportunities. The influence of these theories on the current study has been assessed to validate their impact on the financial performance of banks.

Financial performance is a slanted measure of how well an organisation can use the assets in its possession to generate revenues for the core purpose for which it was established. Gatsi (2012), posits that financial performance measures like profitability and liquidity, among others, provide a valuable tool for interest groups to evaluate the past financial performance and the current position of a firm. These ratios can be classified into two main types: profitability ratios about sales and profitability ratios about investment. Ishfaq, Naveed, and Zulfqar (2010), opines that, capital structure differs from one industry to the other and that it is relevant to distinguish the capital structure of banking sector companies from other companies. From this backdrop, Ahmad, Naveed, and Zulfqar (2011), acknowledged that the current business environment is unsustainable without banking sector because of the risky nature of the

modern business environment coupled with the fact that, the corporate firms have limited capacity to mitigate all risks that they face during their operations. This is important to provide the banking sector with knowledge related to the nature of its capital structure. This would assist financial managers to perk up their financing decisions regarding their financing mix. By taking into account some key variables that influence their capital structure, financial managers of the banking industry can better achieve their overall performance goals.

1.2 Problem Statement

According to Ebaid (2009), capital structure has a weak-to-no influence on the financial performance of listed firms in Egypt. Ebaid suggests that by using three accounting-based measurements of financial performance which is Return on Asset (ROA), Return on Equity (ROE), and Gross Margin (GM), the empirical tests have made it clear that capital structure (particularly short-term debt and total debt) and profitability which is measured by ROA has a negative impact on an organization's performance. On the other hand, Sher (2016) suggest that an increase in debt in capital structure causes a decrease in profitability which includes return on asset (ROA), return on equity (ROE), net profit margin (NPM), and return on capital employed (ROCE).

Zeitun and Tian (2007), find out that a firm's capital structure has a significant and negative impact on the firm's performance measures in both the accounting and market measures. Aside from that short-term debt per total asset has a significant relationship with the market performance measure. Bank of Ghana banking sector report in 2016 revealed that, indicators of profitability for the banking industry showed a decline in profitability with declining trends in annualised data on after-tax

Return on Equity (ROE) and pre-tax Return on Assets (ROA). The banking industry's ROA decreased to 4.8 percent in July 2016 from 5.6 percent in July 2015, while ROE decreased from 27.3 percent to 23.5 percent over the same period. The ratio of gross income to total assets (or asset utilisation) was 5.6 percent in July 2016 compared with 5.8 percent in the corresponding period in 2015. Banks also recorded a net interest spread of 9.2 percent in July 2016 compared with 7.1 percent in July 2015.

The sector's income before tax registered a negative year-on-year growth of 0.5 percent in July 2016 compared with a growth of 18.2 percent in July 2015. Similarly, the industry's net profit after tax contracted by 1.0 percent in July 2016 compared with a 15.1 percent growth in the same period last year. The industry's net interest income recorded a slower growth of 19.4 percent in July 2016 compared with a 34.5 percent growth in July 2015.

In 2017, profitability in the banking sector also declined for the period ending June 2017 compared with the same period last year with profitability indicators such as the banks' return on assets (ROA) and return on equity (ROE) declining. The industry's income before tax of GH¢1.53 billion contracted by 0.4 percent year-on-year in June 2017 compared to a 3 percent annual growth in June 2016. The decline was due to factors such as, modest growth in loans and advances, increasing non-performing loans, lower yield on investments and net interest income. Growth in operational costs also led to further declines in income before tax for the industry. The industry's net income of GH¢1.00 billion contracted by 5.2 percent year-on-year in June 2017.

The two key profitability indicators, namely, after-tax return on equity (ROE) and pre-tax return on assets (ROA) recorded declines during the period under review. The banking industry's ROA decreased from 4.9 percent in June 2016 to 3.7 percent in

June 2017, while the ROE declined from 22.9 percent to 17.7 percent over the same review period.

Banking sectors' ratio of gross income to total assets (asset utilisation) declined from 9.8 percent in June 2016 to 9.2 percent in June 2017, an indication that banks generated relatively less income from the use of their assets in June 2017 compared with June 2016. Banks' interest spreads, also declined from 7.8 percent to 6.3 percent during the same review period

Based on the above discussion concerning the decline in the financial performance of the banks, could capital structure which has been described by Dhanasekaran, Kumar, Sandhya and Saravanan (2012), as "the blood of any business" be the cause of this decline? Arising from the findings of Dhanasekaran et al (2012), which indicate that the capital structure employed by the banking industry could influence their financial performance, then there is a need for a study to be conducted on the capital structure of the banking industry in Ghana to determine what causes the decline in their financial performance indicators.

On that note, the study seeks to examine the effect of capital structure (measures as short-term debt ratio, long term debt ratio, and total debt ratio) on financial performance (measured by Return on Assets and Return on equity) of listed banks in Ghana. Apart from the above issues, studies such as Akoto and Gatsi (2010) and Abor (2005) on capital structure and firm performance have failed to incorporate the effect of macroeconomic factors on the performance of companies, especially in the case of Africa where macroeconomic factors continually fluctuate to the disadvantage of profit-making organizations.

1.3 Aim of the Study

The aim of the study is to investigate the relationship between capital structure and the financial performance of listed banks in Ghana.

1.4 Objectives of the Study

The following specific objectives will guide the study:

1. To investigate the relationship between capital structure and the financial performance of selected listed banks in Ghana
2. To determine the effect of inflation on the financial performance of listed banks in Ghana.
3. To determine the effect of Gross Domestic Product (GDP) on the financial performance of listed banks in Ghana.
4. To determine the effect of exchange rate on the financial performance of listed banks in Ghana.



1.5 Research Questions.

- i. Does the capital structure of listed banks in Ghana have any significant relationship with their financial performance?
- ii. What effect does inflation has on the financial performance of listed banks in Ghana?
- iii. What effect does GDP has on the financial performance of listed banks in Ghana?
- iv. What effect does exchange rate has on the financial performance of listed banks in Ghana?

1.6 Significance of the Study

Findings from this study would provide several issues concerning the relationship between capital structure and financial performance and will mainly be significant for all stakeholders such as investors, shareholders, and managers of banks in the determination of capital structure and how many portions of the debt are significant for profitability.

The study would also create room for future researchers to organise similar research. The findings of this study would contribute to the existing literature on the relationship between capital structure and financial performance.

The study would assist the various stakeholders to become aware of the relationship that exists between capital structure and the financial performance of the banking sector to help in knowing which capital mix is best for them.

1.7 Scope of the study

Capital structure is broad but the scope for the current studies is based on short-term debt, long-term debt, and total debt. The reason for this scope is derived from studies such as Head and Watson (2010); Ross, et al (2011), which indicated that the above-listed scope fully explains the issues of capital structure. The study emphasizes all Listed Banks in Ghana that are incorporated under the Ghana Companies Code 1963 Act 179 and have prepared their financial statements covering the period from 2010 to 2020.

1.8 Structure of the Study

The study is divided into five (5) chapters.

Chapter one of the study consists of the general introduction which includes; the background of the study, the statement of the problem, the objective of the study, the

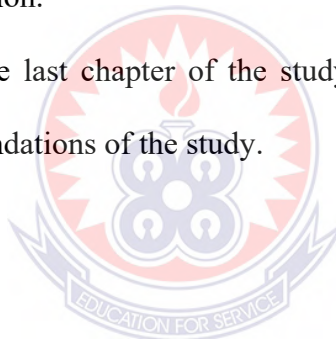
research questions, the significance of the study, the scope of the study, the limitations of the study, and the organisation of the study.

Chapter two is the literature review which gives the historic perspective of the topic and also seeks to evaluate the works of other researchers on the subject, their approaches on the subject.

Chapter three focuses on research methodology and research design. It discusses the research methodology and research design, composition of the sample, sites and population. The chapter also discusses different methods used in capturing, recording and analyzing the data collection.

Chapter four looks at result and discussion. The chapter presents the result, interpretation and discussion.

Chapter five which is the last chapter of the study well as the summary, findings, conclusion and recommendations of the study.



CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews studies on relevant literature of capital structure and financial performance. It starts with the overview and the history of the banking sector in Ghana followed by the discussion of the various theories of capital structure. The chapter further looks at the empirical review where some selected research methodology, findings, and recommendations of earlier researchers in relation to capital structure and financial performance are reviewed. The chapter also covers the conceptual framework.

2.1 Overview and history of the banking industry in Ghana

Banks are financial intermediaries that accept deposits from surplus spending units and channel these in the form of loan products to deficit spending units in the economy. The banking sector is essential for economic development. Banks provide a market for loanable funds where surplus spending unit and deficit spending unit are brought together in well-organized structures. The business of banking started in the then Gold Coast during the colonial era with the aim of providing financial services to the British enterprises and the colonial administration.

In 1896, the Bank of the British West Africa (which later became Standard Chartered Bank in 1985) opened its first branch in Accra. The success of the bank attracted other foreign banks to begin operations in the then Gold Coast. The Colonial Bank for instance started its operations in 1918 and later merged with Anglo-Egyptian Bank, the National Bank of South Africa and Barclays Bank and became known as Barclays Bank. The Bank of the British West Africa and Barclays Banks were the only banks

operating in the Gold Coast during the period, 1920 – 1950. The Ghana Commercial Bank was established in 1953 as the first indigenous bank to reduce the control of the banking sector by the two expatriate banks.

Immediately after independence in 1957, the Bank of Ghana was established to take control over the management of the country's currency. By 1974, many state-owned banks and Development Financial Institutions (DFI) had also been set up to enhance the financial sector by providing services, otherwise ignored by the commercial banks. Examples included the National Investment Bank, Agricultural Development Bank, Bank for Housing and Construction, Merchant Bank, the Social Security Bank. The DFIs raised finance through deposit mobilization, government support and foreign loans and were involved in providing commercial and development banking services.

The reforms experienced in the financial sector and the enactment of the banking law in 1989 (PNDC Law 225) saw the operations of a number of locally incorporated banks, including the Meridian (BIAO). The Trust Bank, CAL Merchant Bank, Allied and Metropolitan Bank and Ecobank. There was too much government control in the financial sector after independence. Banks that were set up between the 1960s and the 1970s were either wholly or majority owned by the public sector. In 1992, however, Government began to privatize some of the state-owned banks and the liberalization of the financial sector led to the entry of a number of foreign banks into the banking industry as well as an increase in the number of domestic banks. The liberalization of the financial sector under the Financial Sector Adjustment Programme (FINSAP) and Financial Sector Strategic Plan (FINSSIP) also brought about improved savings, enhanced deposit mobilization, financial deepening, and competition in the banking industry. However, lending rates were high with wider spread between deposit and

lending rates. The introduction of the new Banking Act in 2004 also led to the elimination of secondary reserves and adjustments in the minimum capital. The minimum capital was initially increased to GHS 60 million in 2007 and then in 2013 it was increased to GHS 100 million. The new Act also saw the introduction of the Universal banking license, which allows banking to provide various forms of banking services.

Mergers and acquisitions of some banks also emerged largely on account of the surge in the minimum capital requirement with recent examples including Consolidated Bank Ghana, which is merger of Capital Bank, Unibank and Intercontinental Bank, Ecobank and TTB Bank, HFC Bank and Republic Bank of Trinidad and Tobago. Currently, there are 27 universal banks operating in the country with 16 foreign-owned and 11 Ghanaian-own, with 6 banks holding more than half of the total assets of the sector.

There are significant implications about the changes in the Ghanaian banking sector for the economy over the years. First of all, the influx of foreign banks, especially from Nigeria, has led to intense competition in Ghana's banking industry, with respect to size of deposits and the size of market share of the various banks. There are currently seven banks from Nigeria operating in Ghana representing about 26 per cent of the total number of banks in the country. The high presence of Nigerian Banks in Ghana has been occasioned by the ECOWAS protocol and the favourable economic environment in Ghana as well as the relatively high minimum capital requirement for banks operating in Nigeria. It is however important to recognize that the level of competition in the Ghanaian banking sector has a causal effect on the level of efficiency and we have seen some appreciable level of improvement in service delivery and efficiency across the various banks in the country. Again, the

competition in the banking industry has also led to technological innovations with the introduction of automated teller machines (ATMs), e-banking, telephone banking, SMS banking etc. These technological innovations have contributed largely to deepening banking services in Ghana.

The influx of new banks into the banking sector has also increased the level of offshore funds, which have been brought in to support credit creation in the sector. One important function of foreign banks is the injection of overseas capital into the economy, thus allowing for the generation of more investment funds to spur production and growth. In essence, foreign loans help loosen the constraints on domestic savings and investments.

The recent competition has also changed banks' approach to dealing with Small and Medium Enterprises (SMEs). Most banks have now set up SME desks in order to concentrate and provide specialized banking services to SMEs. However, these SME outfits are not really doing anything different from what pertains in corporate banking. Lending requirements applicable to large corporates still apply. Therefore, more work needs to be done in terms of improving banks' appreciation of the peculiar challenges confronting SMEs and how to fashion out products targeted at addressing those needs. Banks should also consider providing advisory services to SMEs through their SME departments. Most SMEs may not really require loans but advice on how to manage their financial resources.

Mergers and acquisitions prompted mainly by the increase in the minimum capital requirement of banks to GHS 100 million have also created larger banks with huge capital base or balance sheet to finance major deals, with implications for increasing GDP growth. Increasing the minimum capital is also useful in the sense that banks are

better cushioned against possible losses from credit and liquidity risks. Larger banks are generally more capable of withstanding the shocks confronting industry.

The downside of the changes that have occurred in the banking sector over the years particularly from the early 1990s is the high interest rate spread suggesting high lending rates and low deposit rates. Low deposit rates tend to discourage savings by the public in the presence of low deposit rates of banks relative to the rates of other instruments, investible funds are likely to find their way to other investment vehicles such as government treasury bills and thus reduce savings mobilization. On the other hand, high lending rates do not only impede access to credit but also increases default rate of those who borrow at a high rate. Thus, despite the various reforms and policy initiatives in the Ghanaian banking industry aimed at improving efficiency in the industry in order to curtail interest rates, banks continue to exhibit high interest spreads and the high inflation rates also tend to compound the situation.

It is important for regulators to ensure that the banking sector remains competitive so as to curtail a high interest spread. There is the need to balance the requirements to maintain certain levels of capital adequacy and reserves to promote financial safety against the need to reduce the bank net interest margins. The need to keep inflation within reasonable levels is paramount since the level of inflation tends to feed into bank interest spreads. In this regard, a persistent effort to reduce the current high levels of government budget financing will go a long way to reduce inflation and ultimately bank interest spreads.

In 2017, the Bank of Ghana mandated the GCB Bank PLC to acquire the UT Bank and the Capital Bank due to liquidity and solvency challenges to prevent the two banks from collapsing. Liquidity is the ease to convert assets to cash to settle obligations. Solvency is the ability to meet short and long-term obligations of a bank.

In 2018, the Bank of Ghana merged the five banks to form the Consolidated Bank Ghana (CBG).

2.2 Theoretical review

The theoretical review section covers issues that relate to the relationship that earlier studies have been to establish between the financial performance and the capital structure of firms. A number of empirical studies have identified various determinant of capital structure of firms such as firm level characteristic and macroeconomic variables that affect capital structure and financial performance of firms

2.2.1 Value-Irrelevance Proposition by Modigliani & Miller

The Modigliani-Miller (M & M) Theorem, is one of the most important theorems in corporate finance. The theorem was developed by economists Franco Modigliani and Merton Miller in the year 1958. The main idea behind M&M theory is that the capital structure of a company does not have any significant effect on its overall value. In their contribution to theories on capital structure, they came out with two main propositions namely M and M proposition I and M and M proposition II.

The first proposition of the M&M had a lot of limitations as it was developed under the assumption of perfectly markets, in which companies do not pay taxes, while there are no bankruptcy costs or asymmetric information. Subsequently, Miller and Modigliani developed the second proposition of their theory by including taxes, bankruptcy costs, and asymmetric information.

2.2.1.1 M and M Proposition I

This is the first proposition of the M&M theorem under assumption of perfectly efficient markets implies that companies operating in the world of perfectly efficient markets do not pay any taxes, the trading of securities is executed without any

transaction costs, bankruptcy is possible, but there are no bankruptcy costs, and information is perfectly symmetrical.

According to MM proposition 1, firm value is irrelevant to capital structure or financing decision. The notion was that, it is completely irrelevant how a firm chooses to arrange its finance. In other words, the value of the firm is independent of its capital structure. In drawing this conclusion, the emphasis is made to the following assumption;

Firstly, the assumption that the capital markets perfect was central to their discussion and it meant that, bankruptcy risk could be ignored so that distressed companies could always raise additional finance in a perfect market. The notion of the perfect capital market is given the meaning that the stocks of different companies are homogenous and they can serve as perfect substitutes, Investors are consensus about the expected future returns for all shares and all securities are traded under perfect market conditions. In sum according to the theory, the first proposition essentially suggests that the company's capital structure does not impact its value. Since the value of a company is calculated as the present value of its future cash flows, the capital structure cannot affect it. Also, in perfectly efficient markets, companies do not pay any taxes. Therefore, the company with a 100per cent leveraged capital structure does not obtain any benefits from tax-deductible interest payments.

2.2.1.2 M & M proposition II

Modigliani and Miller (1963) amended their model in their second paper and the result was proposition II. The amendment according to Kayo and Limura (2010), under assumptions that companies pay taxes; there are transaction, bankruptcy, and agency costs; and information is not symmetrical.

This means that tax shields that result from the tax-deductible interest payments make the value of a levered company higher than the value of an unlevered company. The main rationale behind this theory is that tax-deductible interest payments have a positive significant impact on a company's cash flows. Since a company's value is determined as the present value of the future cash flows, the value of a levered company increases.

However, they indicated that, although the varying capital structure of the firm may not change the firm's total value; it does cause important changes in the firm's debt and equity. M &M II demonstrated that, as the firm raises its gearing proportion, the increase in leverage raises the risk of the equity and therefore the required return or cost of equity. Modigliani and Miller (1963), Proposition II proposed that the cost of equity depends on three things: the required rate of return on the firm's assets; the firm's cost of debts and the firm's debt-equity ratio.

Modigliani and Miller therefore concluded that the cost of capital or the required rate on return on the firm's assets does not depend on the debt-equity ratio; it is the same no matter what the debt-equity ratio is. The import of this is that the firm's overall cost of capital is unaffected by its capital structure. Hence, the fact that the cost of debt is lower than the cost of equity means that, the benefit of cheaper debt capital is exactly offset by the increase in the cost of equity from borrowing as a result of the increment in financial risk exposure to the equity holders of the company. In other words, the change in the weight of debts and equity in the capital structure of a particular firm is exactly offset by the change in the cost of equity, so the cost of capital of the company stays the same.

Modigliani and Miller (1963), having proved the irrelevance theory of capital structure, have left the finance world into what the researcher can describe as the

capital structure puzzle since the arguments put forward by other scholars on the relevancy of the term have been found to be the reality after proving that the assumptions put forward by those great scholars do not hold in the real world. It is in the face of this that other theories have also sprung up in corporate finance over the years. Gatsi (2012), recognized that, the fundamental theoretical model of capital structure centres on some key assumptions which include; the idea that firms have information that investors do not have, and that the interest of managers, equity – holders and debt holders may not coincide.

The researcher also found that though the theories have also recognized the benefits of financial leverage in firm financing while avoiding friction and bankruptcy costs of financial distress arises the need to review friction and bankruptcy cost. These recognitions have led to three dominating theoretical models, namely the Static Trade-Off model, the pecking order theory, and the free cash flow theories. Enclosed in these three theories are additional ones but for the purpose of the current study, the three theories and some of their accompanying theories are used to explain the capital structure decisions of banking industry in Ghana. The bankruptcy cost is considered in terms of the static trade-off choice while the information asymmetry, market timing theory and signaling theory, as noted by Abu -Rub (2012), are rooted in the pecking order theory framework.

2.2.2 The Pecking Order Theory

This theory was proposed by Myers and Majluf in 1984. Besides information asymmetry between the insiders and the outsiders, Myers and Majluf (1984), like Modigliani and Miller assumed a perfect market. The managers will feel reluctant to issue new undervalued shares if they are acting in favor of shareholders. In equilibrium, a firm issues new stock only at a market-down price. Managers will issue

new equity shares with the hope of getting offset by the Net Present Value of growth opportunity or new investment opportunity. This leads to drop in share price. Hence, this is a bad news for assets in place. The issue becomes worse as the information asymmetry increases. For investing, firms with more growth opportunity are better than matured firms, because the price falling down is affected by growth opportunity value versus assets in place. Debt has the prior claim over equity and debt issuers are less exposed to information asymmetry. Therefore, issue of the debt should have an effect on price as compared to equity issue. Kim and Stulz (1988), found that share price increased with the announcement of debt issue. But in the case of equity issue, Masulis and Korwar (1986), discovered that the share price falls after announcement of equity issue.

As pecking order theory suggests firms rely on internal sources with lowest information asymmetry costs, then debt and ultimately equity with highest information asymmetry costs. Firms do not have optimal debt ratio and hence the firm's debt ratio is representing the accumulated external financing required. As this theory says, firms with more profitability issue less debt. On the basis of pecking order theory, net debt issue should track financial deficit closer than net equity issue. Myers came up with modified pecking order theory. He proposes that the firm should take advantage from filling the financial slack by issuing equity when the information asymmetry is less. With the way proposed by Myers firms can issue debt with more flexibility.

That is why firms with some growth maintain low debt issue. Shyam-Sunder and Myers demonstrated strong validity for the pecking order theory while Frank and Goyal (2003) provided little support for that. In contrariwise, Korajczyk, Lucas and McDonald (1992), found that debt issues do not have priority to equity issues. Firms

facing with financial deficit while they are working close to their debt capacity may not issue debt even if the firms track the pecking order theory. Issue of more debt exceeding the debt capacity point will reduce the firm value. Firms working near debt capacity point will issue equity even if debt is preferred. With above concept, it has been concluded that the debt capacity point is similar to the target debt ratio explained in the traditional trade-off theory of capital structure.

Hence, it is very difficult to distinguish between two theories of capital structure. One of the useful ways to identify which firms are following the traditional trade-off theory or the pecking order theory is that at the time of IPO check whether firm has used all internal sources (retained earnings) or not, if the company used all internal sources for investing in the new project, then it is following the pecking order theory. As pecking order theory proposes, small firms with more growth opportunities should issue more debt than equity. We should distinguish between firm's information asymmetry and industry's information asymmetry, but type of industry they are working has more volatile environment and therefore more information asymmetry. Capital structure researchers have neglected this aspect of information asymmetry. Information asymmetry may be related to a firm's value or related to firm risk. Pecking order theory clearly speaks about the asymmetry related to the firm's value and debt as a solution.

Nevertheless, when we are facing asymmetry which is related to the risk of the firm, debt is a bad choice, because risk-sharing phenomena mentioned earlier in the disadvantages of debt. Halov and Heider (2004) tried to test this by taking asset volatility as a proxy for risk. They demonstrate that with an increase in asset volatility using equity is more frequent as compared to debt.

2.2.3 The Traditional Trade-off Theory

Using tax shield as a determinant of the capital structure was suggested in the MM proposition by Modigliani and Miller themselves. Later, it was recognized that benefits of the tax shield are offset to a great extent by the costs of financial distress. However, the tax shield is an observable factor but the costs of financial distress are not. So, to be on the safer side, firms maintain a safety of margin before taking advantage of the tax shield. Hence, benefit from tax shields are offset by costs of financial distress. They entitle this theory to the trade-off theory. It seems to costs of financial distress and benefits from tax shields are balanced. Therefore, we expect companies with more costs of financial distress have less debt in their capital structure. Trade-off theory suggested the modified MM proposition.

They stated that firm value $(V, \text{firm}) = V + PV(\text{interest tax shields}) - PV(\text{costs of financial distress})$ Where V is the value of the firm with entire equity. There are some fundamental concepts of the Traditional Trade-off Theory. Typically, this theory explains why firms follow a moderate and cautious approach to debt issues despite the benefits of tax shields. There are some testable implications of this model like firms with high risk, firms with abnormally growth opportunities, and firms with intangible assets will issue less debt as these have high costs of financial distress. Firms with assets that have secondary markets may issue more debt.

Firms with more tax advantage may issue more debt. Mackie Masonm shows that tax-paying firms favor debt. Long-term debt is significantly dependent on the firm's efficient marginal tax. On the contrary, as Fama and French (2002) discovered, there is not any net tax benefit in debt, and in equilibrium, debt is along with bad news about profitability that overrides interest tax shield or other benefits of debt. They also found an inverse relationship between the value of a firm and debt, even after holding

constant earnings, and investment. There has been evolved a more general theory of trade-off which considers many more factors besides tax and costs of distress for comparing the advantage and the disadvantages of the tax and equity and obtains a trade-off. In this more general theory, there are several arguments as why firms might try to adjust their capital structure. Some of the advantages of debt are as follows (besides the interest tax shields advantage):

Debt is a valuable device for signaling by firms. It was suggested by Ross (1997) that leverage increases firm's value, because enhancing leverage is coincide with the market's realization of value.

Agency costs related to equity will be reduced by debt. These agency costs are such as free cash flow problem or also called over investment problem. Debt reduces the agency cost of management so that it disciplines managers.

Disadvantages of debt are as follows (besides the costs of financial distress /bankruptcy):

Managers acting in shareholders' interest may shift investment to more risky assets and the costs are incurred by the debt holders.

Managers may borrow still more and pay out to the shareholders; hence the debt holders suffer.

Excessive debt leads to the underinvestment problem or 'debt overhang' problem. This means that many good projects may be passed on because more debt cannot be issued at the right time due to the existing debt.

2.3 Empirical review

The empirical review section covers issues that relate to the relationship that earlier studies have been to establish between the financial performance and the capital

structure of firms. A number of empirical studies have identified various determinant of capital structure of firms such as firm level characteristic and macroeconomic variables that affect capital structure and financial performance of firms.

2.3.1 Relationship between capital structure and the financial performance of firms

In examining the relationship between capital structure and firm financial performance, numerous studies have been conducted by researchers that indicate a significant relationship between the two variables. These include a study by Muzaffar, Iftikhar and Jafary (2019) which was on the relationship between capital structure and financial performance of the firms in the textile sector.

The findings of their study implied that debt to equity positively influences the return on capital employed by the firms. It further stated that, debt to total funds also has a positive relationship with return on capital employed. Hence, it was concluded that there is a relationship between capital structure and financial performance is significantly positive. Companies must undertake the optimal level of debt and equity ratio in their capital structure.

Contrary to this study was research conducted by Fu (1997), which was on the relationship between capital structure and profitability using a cross-sectional study on the Malaysian firms. The study was aimed at solving the dearth of research on the effect that the capital structure has on the profitability of firms in Malaysia.

In view of that the researcher took a total of 267 firms listed on the Kuala Lumpur Stock Exchange for a period of ten years from 1985 to 1994. Two major sets of variables were used in the study to indicate capital structure. These are Debt to Equity Ratio that was decomposed into Debt Ratio, Financial Leverage Ratio, Funded Capital Ratio, Funded Debt Ratio, Current Debt Ratio, Funded Assets Ratio; and,

profitability which was measured by Return on Equity, Earnings Per Share, Return on Investment, Profit Before Tax, Net Income. Using the time-series cross-sectional methodology the data was analysed and in order to generate empirical evidence, the Pearson Product-Moment Correlation, mean and bar chart analysis were employed. Fu (1997) results implied that profitability is significantly related to capital structure. Specifically, profitability was inversely or negatively related to the amount of liability in a company's capital structure. Hence, the gearing of the company turns to increase whenever the firms' profitability level reduces. His study also found evidence of the existence of an optimal capital structure among listed companies and that firms of different sectors were found to adjust their capital structure regularly in order to achieve an optimal combination of debt and equity.

Ahmadimousaad, et al (2013), investigated the determinants of the capital structure of Iranian firms listed on the Tehran Stock Exchange for the period between 2001 and 2010. The results indicated that size and risk factors are positively related to capital structure while profitability, growth, and tangibility are negatively related to capital structure. A panel data set of 123 firms for the 10 years period was collected from published annual reports of companies from the Tehran Stock Exchange. The study reviewed the Trade-off theory and Pecking order theory to examine the determinants of capital structure. Size, profit, growth, tangibility, and risk factors are the variables adopted for the study to represent the potential influence of traditional theories. The study analyzes the impact of the financial factors on the debt and equity structure of Iranian firms. The result of firm size is in line with the trade-off theory and the result of profitability, growth, and tangibility are in line with the pecking order theory.

Abor (2008), emphasised that, firm size contributes to firms' profitability and that large firms have greater chances of contracting more funds to finance their operations

while small firms might not obtain the same funds. The effect of aged of institutions on their financial performance is not so different from their size because as the company grows all things being equal their size is also expected to increase hence their ability to increase operations which would facilitate improvement in their financial performance.

Sales growth is also significantly important in that from the capital structure theories reviewed such as pecking order theory, and information asymmetry, there is a relationship between financial performance and sales growth. Large firms are seen to be more diversified and therefore have lower difference in earnings which gives them an upper hand in tolerating high debt ratios (Ahmad *et al.*, 2011). Smaller firms on the other hand may find it relatively more costly to decide. Thus, lenders to larger firms are more likely to recover their funds than lenders to smaller firms. This simply means that larger firms will have higher debt. Empirical evidence on the relationship between size and capital structure supports a positive relationship.

Nirajini and Priya (2013), in their study on the capital structure and financial performance from 2006 to 2010 financial years of listed trading companies in Sri Lanka using correlation and multiple regression analysis to analyse the data for the study. The study revealed a positive relationship between capital structure and financial performance. Capital structure also significantly impact on the financial performance of firms since the debt asset ratio, debt equity ratio and long-term debt correlated with gross profit margin (GPM), net profit margin (NPM), Return on Capital Employed (ROCE), Return on Asset (ROA) and Return on Equity (ROE).

Ebaid (2009) on his study on the relationship between the different debt-equity combinations with company's performance revealed that capital structure, measured by total debt, was not significantly related with Return on Equity and Gross profit

margin by using multiple regression to find out the impact of debt policy on company's performance.

Musah (2017), assessed the effect of capital structure on the profitability of commercial banks in Ghana. The study uses short-term debt ratio, long-term debt ratio, and total debt ratio as a measure of capital structure and Return on Assets and Return on equity as a measure of profitability. Twenty-three (23) banks were sampled over a six-year period (2010 to 2015) and data was extracted from annual reports of these banks. Data were analysed using descriptive statistics, correlation analysis, and panel regression analysis.

The results of the study showed that banks in Ghana are highly leveraged with debt financing constituting 84% of total capital out of which 77% is short-term debt despite the increase in the minimum equity capital of these banks. The result from the regression analysis also revealed that the short-term debt ratio and the long-term debt ratio are negatively related to the profitability of banks in Ghana. However, the total debt ratio tends to be positively related to the profitability of Banks in Ghana. The control variables used in the study are firm size, foreign ownership, and age, growth of the bank. The result further revealed control variables firm size, foreign ownership, and age, were positively related to bank profitability whiles growth in customers' deposits was negatively related to banks' profitability. The results also revealed that commercial banks in Ghana's reliance on short-term financing (deposits) reduce bank profitability and therefore should shift their financing focus from deposits to other sources. The results call for firms to choose the right mix of short-term and long-term debt that will maximize the profitability of the bank.

Awunyo-Vitor & Badu (2012) examined the relationship between capital structure or leverage and the performance of listed bank in Ghana from 2000 to 2010 by collecting

data from Ghana stock exchange and annual report of the listed banks. Panel regression methodology was used to analyse the data. The result of the study showed that listed banks on the Ghana Stock Exchange are highly geared and this is inversely related to the banks' performance and hence a negative relationship between capital structure and financial performance of listed banks.

However, in my view using just 7 banks is not enough to generalise the findings for banks in Ghana. Results from these empirical works shows that firms with high future returns prefers to use debt to equity in funding their activities. Also, from the foregoing discussions based on the available empirical literature, it is evident that the results from the investigations into the relationship between capital structure and profitability are inconclusive, and requires more empirical work. The researcher therefore believes that, the knowledge of how capital structure affects financial performance of the banking sector of Ghana would enhance efficient and prudent financing decision which would in turn make the banking competitive.

2.4 Conceptual Framework

Following the review of the literature, below is the conceptual model formulated to illustrate the impact of capital structure and macroeconomic variables on financial performance of listed banks in Ghana.

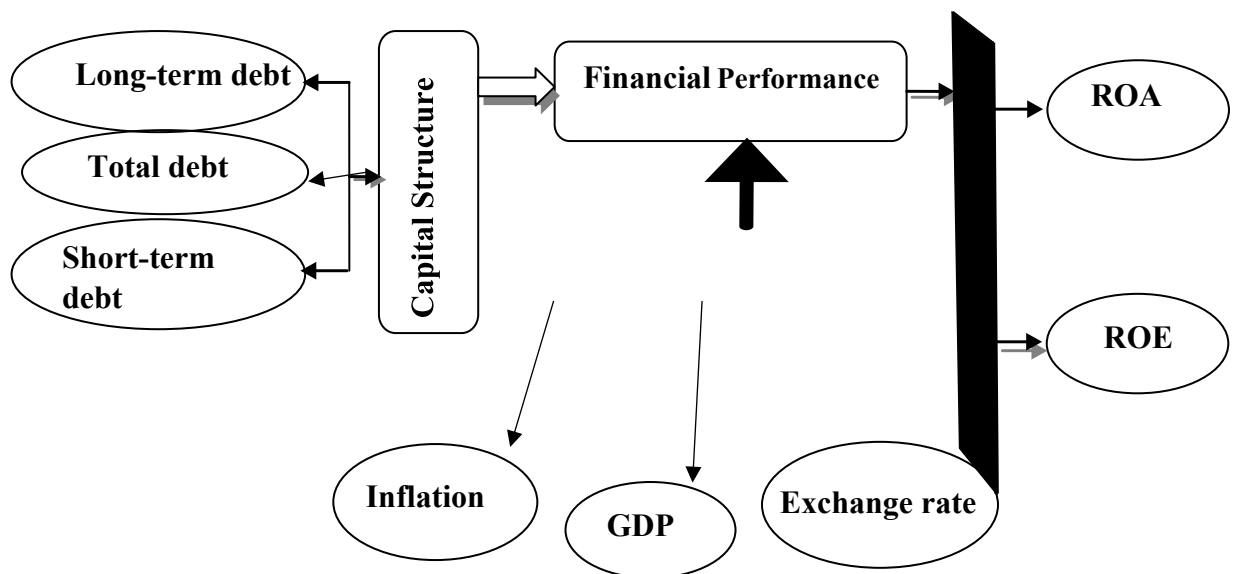


Figure 1: Conceptual framework

From the figure above, capital structure ratios include long-term debt to equity, short-term debt to equity and total debt to equity while financial performance indicators are captured by return on asset (ROA) and return on equity (ROE). Macroeconomic variables are also captured by inflation, Gross Domestic Product (GDP) and exchange rate. Financial performance indicators are the independent variables and the capital structure ratios are the dependent variables. The introduction of the macroeconomic variables was used as control variables.

The study examines the relationship that exist between capital structure ratios as well as macroeconomic variables and financial performance of listed banks in Ghana.

2.4.1 Dependent variables

Three dependent variables, namely, return on asset (ROA) and return on equity (ROE) were used to assess profitability of the listed banks in the study. Researchers

Return on asset (ROA) was estimated as the ratio of net income that is after tax profit per Ghana cedi of asset to total asset. This ratio measures after tax profit per cedi of assets. It is also called return on investment (ROI).

2.4.1.2 Return on equity

The return on equity (ROE) was defined as the product of ROA and equity multiplier. Where ROA is a measure of financial performance linked to the asset size of the listed banks while the equity multiplier which explains the extent to which the assets of listed banks are funded with equity relative to debt is a measure of leverage (Saunders and Cornett, 2004).

2.4.2 The Independent Variables

The main independent variables considered for the study were; short- term debt to total capital, long-term debt to total capital and total debt to total capital. The other variables such as inflation, gross domestic product and exchange rate were used as controlling variable as were used by Otambo (2016) and Owolabi (2017) in their research into the impact of macroeconomic variables on financial performance of firms in Nairobi and Nigeria respectively.

The ratio of short-term debt to total capital

This ratio is defined as the ratio of short-term debt to total capital. It is considered to measure the extent to which the listed banks under study use short –term debt to finance their operations and how this category of debt associates with the firm’s profitability for the chosen period of the study. Musah (2017) established that firms use a significant amount of short-term debt to finance their activities relative to long term debts. According to Musah (2017) there exist a significantly positive association between company profitability and short-term debt to total capital ratio. Hypothesis stated for this variable is;

H1: Financial performance has a relationship with short –term debt ratio of listed banks in Ghana.

The ratio of long-term debt to total capital

This is the ratio of long-term debt to total capital. It measures the extent to which listed banks use long-term debt to finance their operations and how this category of debts associates with the firm’s profitability for the chosen period of the study. Musah (2017) and Adesina *et al* (2015) established that firms use a relatively lesser amount of long-term debt to time their activities relative to short-term debt. Musah (2017) indicated that there is an inverse relationship between company profitability and long –term debt to capital ratio. It should however be noted that Adesina *et al* (2015) observed a positive association between long-term debt and a firm’s profitability.

H2: Financial performance has a relationship with long –term debt ratio of listed banks in Ghana.

3.5.2.3 The ratio of total debt to total capital

This is the ratio of total liabilities to total capital. Basically, it is the summation of short-term debt and long-term debt of the firms to their total capital. This ratio measures the extent to which the operations of the firms have been funded with total debt relative to equity and also to see how leverage associates with insurance companies’ financial performance in Ghana. Many studies have been conducted to determine the relationships between leverage and profitability showed a positive association. (Mush, 2017)

3. H3: Financial performance of has a relationship with total debt ratio of listed banks in Ghana.

2.5 Macroeconomic indicators

The macro-economic variables for the purpose of the study are inflation, gross domestic product and the exchange rate. The inflation is used for the study because it represents price stability which affects the loans and deposits of listed banks. Again, gross domestic product is chosen because it represents the amounts of goods and services that an economy produces in a given economy over a given period of time. Finally exchange rate that was used was the rate of exchange between the Ghana cedi and the United State dollars. Gado (2015) indicated that collectively macroeconomic variables such as inflation, GDP, exchange rate have significant impact on financial performance of firms in Nigeria.

2.5.1 Inflation

Inflation is measured using the consumer price index which reflects the annual percentage change in the cost of acquiring a fixed basket of goods and services to the average consumer. This factor is measured as a yearly average inflation variable published by the Bank of Ghana. It is expected that a strong sustainable economic growth improves the intermediation efficiency as it boosts the level of deposits to banks and the demand for loans by individuals and business entities. This is only experienced when noninterest expenses are relatively stable. Owolabi (2017) found that the effect of inflation on financial performance of manufacturing firms in Nigeria is not significant. This was confirmed by Otambo (2016) who also found that the relationship between inflation and financial performance of in kenya to be statistically insignificant.

The hypothesis to be tested for this variable is stated below:

The following hypothesis stated in relation to macroeconomic variables can be addressed.

H4: Financial performance of listed banks has a relationship with the rate of inflation.

2.5.2 Gross Domestic Product (GDP)

GDP is the total value of goods and services produced by a country's economy during a specified period of time. The study used the GDP as a macroeconomic indicator in the measuring financial performance of banks in Ghana. An economy exhibiting a low economic growth will send negative signals to the people, which discourages banking activities such as investments, savings and demand for loans. On the other hand, a strong economic growth results in high intermediation efficiency in the banking sector.

Previous studies by Rao (2016) indicated a statistically insignificant between GDP and financial performance of the energy and petroleum sector in Nairobi Stock Exchange. However, Otambo (2016) found that the GDP significantly affect financial performance of in kenya positively. Hypothesis to be tested for is as follows;

The following hypothesis stated in relation to macroeconomic variables can be addressed.

H5: Financial performance of listed banks has a relationship with gross domestic product (GDP).

2.5.3 Exchange rate

Foreign exchange rate an important control variable because it forms part of the overall economic activities and for the past years, the experience in Ghana testifies, exchange rate influences the cost of items in the country. Gado (2015), in a study on the influence of economic factors on firm performance in Kenya. In the study

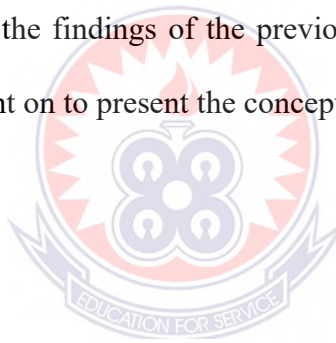
exchange rate was found to have statistically insignificant relationship with financial performance.

In a related study on Ghana, Gatsi (2012) found that, foreign exchange rate negatively influences the performance of listed banks in Ghana. This conclusion was reached after embarking on a cross sectional data covering 2002 to 2011. Hypothesis to be tested for is stated below;

H4: Financial performance of listed banks has a relationship with exchange rate.

2.6 Chapter Summary

This chapter presented the overview and performance of the Banking industry in Ghana as well as the theoretical basis of the study. The idea that was described by previous researchers and the findings of the previous researchers' empirical reviews were also analysed. It went on to present the conceptual framework for the study.



CHAPTER THREE

METHODOLOGY

3.0 Introduction

This section presents the methods that the researcher used in executing the study by discussing the research design, the population, the sample and the sampling procedure. It also discusses the sources of data collection, variables used, the panel regression model and the data analyses plan.

3.1 Research Design

Burns and Grove (2003) define a research design as a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings. Parahoo (1997) describes a research design as a plan that describes how, when and where data are to be collected and analyzed. Polit, Beck and Hungler (2001), also define a research design as the researcher's overall plan for answering the research questions or testing the research hypothesis. Research designs are very important in research work as they are usually employed by the researcher to obtain answers to the research questions. Research design is the overall plan employed by the researcher to obtain answers to the research questions and for testing the hypothesis formulated (Agyedu, Donkor & Obeng, 2011).

This study would adopt a casual research design which explain the cause - and - effect relationships between capital structure and profitability variables. The study adopted Quantitative research design as the approach in line with the objectives of the study. With this Panel regression model is used for this study. According to Anarfo (2015), panel has an advantage over other models when there is a large sample observations

and data because it increases the degree of freedom among the independent variables as well as the predictive power of the model.

3.2 Population

The population for the study included all listed banks in Ghana that are incorporated under the Ghana Companies Code 1963 Act 179 and have prepared their financial statements covering the period from 2010 to 2020.

According to Zikmund (1997) a population is any complete group of entities sharing some common set of characteristics. For this reason, the population for the study was 9 listed banks in Ghana namely Access Bank Ghana Plc, Agricultural Development Bank, CalBank Plc, Ecobank Ghana Plc, GCB Bank Plc, Republic Bank (Ghana) Plc, Standard Chartered Bank Ghana Plc, Societe Generale Ghana Plc, and Trust Bank Limited. The reason only listed banks were used for the study is the high level of legislation and regulation that ensure that banking businesses are pushed to greater heights. Second to competition, 72.7% of the sampled bank executives ranked legislation and regulation as a major factor that would have the biggest impact on the banking industry in the years to come (Ghana Banking Survey, 2014).

3.3 Sampling and Sampling Procedure

Polit et al (2001) define a sample as a proportion of a population. The purposive sampling technique was employed to select listed banks in Ghana from 2010 to 2020 that make the sampling frame of the study.

Purposive sampling technique is most appropriate when sampling units within the segment of the population have the most information of the characteristics of interest. According to Parahoo (1997), purposive sampling as a method of sampling where the researcher deliberately chooses who to include in the study based on the ability to

provide necessary data. This technique was considered appropriate because the gives even and fair generalization of findings.

Listed banks which had their financial statements with the Bank of Ghana and Ghana Stock Exchange between the period, 2010 and 2020 was nine (9) which is relatively small for a sample to be selected for the study.

3.4 Data collection

This study involved only secondary data, specifically the financial statement of commercial banks in Ghana from 2010 to 2020. The secondary data according to Saunders, Lewis, and Thornhill (2007) are made of three groups which are survey-based data, documentary data, and those compiled from multiple sources. The survey-based data describes data, which has been collected through survey strategies, such as the use of questionnaires. Therefore, survey-based secondary data is useful for studies that require data that has already been collected for similar studies. Documentary data comprises memos, news, reports and administrative correspondence that hold information that is critical for the study.

On the other hand, Cheng, Chien and Liu (2010), mentioned that, multiple-source secondary data relates to data collected through the combination of survey-based data and documentary data. Three reasons informed the choice for secondary data for the study. Firstly, the data required for the study could not be procured through primary source because the holders of the data were not willing to release the data. Secondly, the financial performance data of most companies can be obtained from their either their published or unpublished financial statements which offered a basis for their analysis. Finally, an authentic overview of the capital structure of a given company emanates from the appropriate capital structure ratios which can only be computed

from the financial statement for a given period. The data set for the study are classified into two categories; financial data which were obtained from the data of the various banks and the Bank of Ghana and the economic data were accessed from the data file of the Ghana Statistical Service.

3.5 Variable description

Quantitative studies seek to give a precise and objective report about a phenomenon and as such the need to measure the attributes of the phenomenon in quantitative studies (Bui 2009). As described in the study design, this study is quantitative and for that matter. Return on Asset and Return on Equity were used as the independent variables and the independent variables were short term debt to total capital ratio, long term debt to total capital ratio, total debt to total capital ratio. macroeconomic variables: inflation, exchange rate and GDP were used as control variables.

3.6 Panel regression model

The panel regression model used by Abor (2008), Akoto and Gatsi (2010) was adopted for this study. Abor (2008) indicated that panel data provides results that are simply not detectable in pure cross-sections or pure time-series studies. Abor (2008) further argued that the panel data is more useful than either cross-section or time series data as used by Fu (2007) alone due to the following reasons;

Firstly, panel data model provides more edifying data, more variability, less collinearity among variables, more degrees of freedom and more effectiveness. Also, the model provides controls for individual's heterogeneity due to hidden factors. The panel data model again provides better ability to study dynamics of adjustments. Furthermore, the model generates better ability to identify effects that are simply not detectable in pure cross –section or pure time- series data and finally panel data model

enable the researcher to construct and test more complicated behavioural models then cross-section on or time-section data.

3.7 Model specification

The theoretical and empirical literature on capital structure in finance has identified a vector of variables that influence firm financial performance including debt, disintegrated into short-term debt, long term debt, and total debt. The relationship between debt and listed banks financial performance in Ghana is thus estimated in the following regression models:

$$ROA_{i,t} = \beta_0 + \beta_1 STD_{i,t} + \beta_2 LTD_{i,t} + \beta_3 TD_{i,t} + \beta_4 IF_{i,t} + \beta_5 GDP_{i,t} + \beta_6 EX_{i,t} + e$$

..... (1)

$$ROE_{i,t} = \beta_0 + \beta_1 STD_{i,t} + \beta_2 LTD_{i,t} + \beta_3 TD_{i,t} + \beta_4 IF_{i,t} + \beta_5 GDP_{i,t} + \beta_6 EX_{i,t} + e$$

.....(2)

$$ROA_{i,t} = \beta_0 + \beta_1 IF_{i,t} + \beta_2 STD_{i,t} + \beta_3 LTD_{i,t} + \beta_4 TD_{i,t} + e$$
(3)

$$ROE_{i,t} = \beta_0 + \beta_1 IF_{i,t} + \beta_2 STD_{i,t} + \beta_3 LTD_{i,t} + \beta_4 TD_{i,t} + e$$
(4)

$$ROA_{i,t} = \beta_0 + \beta_1 EX_{i,t} + \beta_2 STD_{i,t} + \beta_3 LTD_{i,t} + \beta_4 TD_{i,t} + e$$
(5)

$$ROE_{i,t} = \beta_0 + \beta_1 EX_{i,t} + \beta_2 STD_{i,t} + \beta_3 LTD_{i,t} + \beta_4 TD_{i,t} + e$$
(6)

$$ROA_{i,t} = \beta_0 + \beta_1 GDP_{i,t} + \beta_2 STD_{i,t} + \beta_3 LTD_{i,t} + \beta_4 TD_{i,t} + e$$
(7)

$$ROE_{i,t} = \beta_0 + \beta_1 GDP_{i,t} + \beta_2 STD_{i,t} + \beta_3 LTD_{i,t} + \beta_4 TD_{i,t} + e$$
(8)

Where:

$ROA_{i,t}$ Represents Return on Assets for firm i in time t

$ROE_{i,t}$ Represents Return on Equity for firm i in time t

STD Represents Short Term Debts to capital ratio for firm i in time t

LTD Represents Long Term Debts to capital ratio for firm i in time t

TD Represents Total Debt to capital ratio for firm i in time t

- IF Represent inflation
- GDP Represent gross domestic product
- EX Represent exchange rate
- e is the error term

Exemplary assumptions

From the above model the researcher assumes the following:

1. Capital structure ratios (short term debt-equity, long term debt-equity and total debt-equity) have a positive relationship with financial performance (ROA and ROE) of listed banks in Ghana.
2. Inflation has a positive relationship with financial performance (ROA and ROE) of listed banks in Ghana. Equations
3. Exchange rate has a positive relationship with financial performance (ROA and ROE) of listed banks in Ghana.
4. GDP has a positive relationship with financial performance (ROA and ROE) of listed banks in Ghana.

Equations (1) and (2) are used to investigate the relationship between capital structure ratios and financial performance ratios and equations (3) and (4) are used to investigate the effect of inflation on the financial performance ratios while equations (5) and (6) and equations (7) and (8) are employed to investigate the effect of macroeconomic variables GDP and exchange have on financial performance of listed banks respectively.

3.8 Estimation method

Park (2009) opined that estimation of panel data models using pooled ordinary least squares yields inconsistent estimators and heteroskedasticity errors. The

researcher further stated that if the parameters to be estimated vary across firms the pooled regression is not appropriate because of the heterogeneity in the parameter as an estimate is not well dealt with. From a theoretical perspective, Baltagi (2005), explained that overlooking such structure heterogeneity among cross-sectional and time series could lead to inconsistency estimates of interesting parameters.

Baltagi (2005) noted that correct this problem, it is therefore appropriate to use panel data model. According to the researcher, panel estimation methods including the fixed effect and random effect methods are commonly used in estimating heteroskedastic consistent estimators. Park (2009), further stated the basic differences between the above-mentioned estimation technique was based on the assumption about the relationship between the error term and the covariates. The choice of the estimation process is informed by the deficiencies with pooled ordinary least squares.

Using panel data to estimate models requires the determination of whether there is a correlation between the unobservable heterogeneity in each firm and the explanatory variables of the model. If the final outcome results a correlation which is fixed effect, consistent estimation would be obtained by means of the group estimation. Otherwise, random effects are more appropriate estimator that can be achieved by estimating the equation by cross section generalized least squares (Park, 2009).

The usual econometrics strategy to determine whether the effects are fixed or random is to use the Hausman (1978) test under the null hypothesis. If the null hypothesis is rejected, the effects are measured to be fixed, and the model is then estimated by OLS. If the null hypothesis is accepted, we would have random effects, and the model is then estimated by GLS. In this way we achieve a more efficient estimator of β and the estimated model can be said to be robust, all else equal. But because the some of the independent variables might have multicollinearity the ordinary ridge regression is

used in the study. Park (2009) indicated that, ordinary ridge regression (ORR) is used to correct the problem of multicollinearity though it has the problem of shrinking the estimates toward zero.

3.9 Data preparation and analysis plan

The quantitative data from the financial statements of the listed banks from 2010 to 2020 was used for the study. Two main ratios, the profitability ratio and the leverage ratios were computed using the raw data from the financial statements in accordance with the formulae provided under “measurement of variables”. The profitability ratios computed were return on assets (ROA) and return on equity (ROE). The ratios were used because they are considered as the best financial performance indicators (Dreyer, 2010). The leverage ratios computed were short –term debt to total equity, long –term debt to total equity and total debt to total equity.

Since the study is quantitative in nature, the main sections considered for discussion under the analysis column are the descriptive statistics of the variables, correlation matrix and finally the results of the panel regression estimate of profitability and debt nexus conclude the discussion.

Chapter Summary

This chapter explained the specific methods, procedures and the various techniques used to conduct the study in terms of data collection, presentation and analysis of the data. The study used panel data, mainly from secondary data. The variables used are financial performance ratios (ROA & ROE) as independent variables and capital structure ratios (long-term debt, short-term debt and total debt ratios) as dependent variables while inflation, GDP and exchange rate were used as macroeconomic indicators.

CHAPTER FOUR

RESULTS ANALYSIS AND DISCUSSION

This chapter presents the result and discussions of the study. The results are based on the panel data methodology discussed in chapter three. The first section deals with the descriptive statistics of the dependent, independent as well as the controlling variables used in the study as shown in Table 4.2 while Table 4.2 and 4.3 discusses the correlation matrix the independent and dependent variables. Tables 4.4 and 4.5 discusses the panel regression model results of the study.

4.1 Result presentation and discussion

Table 1: Descriptive Statistics

	Observations	Minimum	Maximum	Mean	Std. Deviation
ROA	154	-3.7	7	0.309	1.877
ROE	154	-0.274	0.491	0.207	12.538
StD	154	0.412	0.957	0.771	0.1013
LtD	154	0	0.351	0.061	0.07
TD	154	0.485	0.99	0.84	0.077
IF	154	7	19	12.5	3.572
GDP	154	4.5	13.6	6.74	2.53
EX	154	1.052	5.806	3.235	1.650

Source: Financial Statements of listed banks in Ghana, 2010 – 2020.

Table 1 shows a summary of descriptive statistics of dependent variables (Return on Assets (ROA) and Return on Equity (ROE)) and independent variables (short-term debt to equity, long-term debt to equity and total debt to equity) as well as some macro-economic variables (inflation, Gross Domestic Products (GDP), and Exchange

rate) in Ghana. It shows the average indicators of variable computed from the financial statement of listed banks operating in Ghana from 2010 to 2020.

From Table 1, the ROA shows an average return on assets 3.09%, the maximum return on assets is 7% and the minimum of negative 3.7%. The return on assets shows an indication of how efficient the bank is using its assets to generate profit which is measured by profit before interest and tax divided by total assets. The average return on assets is lower than the results of Awunyo-Vitor and Badu (2012) whose study showed an average return on assets of 4.3% and a maximum return on assets of 7.92% using a sample of 9 listed banks in Ghana over a 10-year period.

Return on equity showed an average rate of 20.7% and a maximum rate of 49.1% over the study period. The average return on equity, which measures a company's net income over the value of its total shareholders' equity, appears good as it far outweighs the return on assets. This is an indication that an average shareholder of listed banks receives a return of 20.7% and a maximum return of 49.1%.

The first dependent variable which is short term debt to equity has a mean of 77.08% and a maximum of 97.7% which suggests that on average 77% of banks operations in Ghana are financed by short term debt mainly deposits.

Long term debt to equity as an independent variable shows that on average only 6% of banks equity is financed by long term debt. The result is similar to studies on banks in Ghana and other West African countries.

This finding is corroborated by studies done by Abor (2005) and Amidu (2007) on related sectors in the Ghanaian economy like the banking sector. For instance, Amidu (2007) reveals more than 87% of the banks in Ghana are financed by debt and that average long-term debt represents only 8.2% while Abor (2005) reveals that about 45% of the total assets of Ghanaian listed firms are financed by short term debt.

The last main independent variable which is total debt to total capital ratio shows that on average banks in Ghana uses 84% debt and the rest equity in the financing structure. The result is also similar with the findings of Awunyo-Vitor and Badu (2012) on listed banks of the Ghana stock exchange where it was revealed that 87% of their capital was debt.

For the other macro-economic variables, average inflation rate is 12.5% over the 10-year period with the maximum inflation rate standing at 19% and the minimum rate 7.00%.

The average GDP rate of the economy of Ghana for the period of the period is 6.74%, a maximum GDP rate being 13.60% with a minimum of 4.5%. This result shows that fast growing economy to help boost the banks operations.

Finally, exchange rate has a mean of 3.2% with a maximum and minimum rate of 5.8% and 1.05 respectively.

In summary, the results of the descriptive statistics show that banks are financially leveraged with a higher proportion of debt in the capital structure. This is possibly so because all of the banks in Ghana sampled for the study are deposit taking which constitute a component of their liabilities and therefore increasing their leverage.

Table 2: Correlation matrix showing relationship between ROE and other variables

	ROE	SDR	LDR	TDR	IF	GDP	EX
ROE	1						
SDR	-0.0229*	1					
LDR	0.0861	-0.0612	1				
TDR	-0.0119	0.513	0.0714	1			
IF	0.002	0.1492	-0.1762	-0.0621	1		
GDP	-0.004	0.0437	-0.432	-0.423	-0.509**	1	
EX	-0.006	-0.0214	0.451	0.0642	-0.379**	.881**	1

*** Significant at 1%, **Significant at 5%, * significant at 10%

Source: author's computation, 2022.

Table 2 shows a negative relationship between both short-term and total debt ratios with only short-term debt showing statistically significant relationship with return on equity.

As total debt, long-term debt also showed statistically insignificant relationship with return in equity but the relationship between long-term debt and return on equity is positive one. The implication of the results is that banks must reduce their dependence on short term financing and long-term financing but look for a mix of long term and short term that will maximize profitability.

On the control variables, GDP and exchange rate showed a negative relationship with return on equity while inflation showed a positive relationship with return on equity. However, all three macroeconomic variables showed a statistically insignificant relationship with return on equity.

Table 3: Correlation matrix showing relationship between ROA and other variables

	ROA	SDR	LDR	TDR	IF	GDP	EX
ROA	1						
SDR	-0.4170***	1					
LDR	0.1101	-0.0612	1				
TDR	-0.5017***	0.513	0.0714	1			
IF	-0.07	0.1492	-0.1762	-0.0621	1		
GDP	0.042	0.0437	-0.432	-0.423	-.509**	1	
EX	-0.087	-0.0214	0.451	0.0642	-.379**	.881**	1

*** Significant at 1%, **Significant at 5%, * significant at 10%

Source: author's computation, 2022

From Table 3 above, it indicates that short term debt ratio has a negative relationship with return on assets at a 1% significance level. This means that if banks increase the use of short-term financing which is mainly customers deposits relative to other sources of finance, it will reduce profitability of the bank.

Long-term debt, on other hand, showed a positive relationship with ROE though the relationship is statistically insignificant. The results confirm the theoretical finance view that long term source of finance is less expensive as compared to short term debt and as such improves the profitability of the firm. This result suggests that profitability of banks in Ghana will improve if they finance their operations using long term source of finance as compared to the current short-term debt being relied upon.

The result between total debt ratio and return on assets is also negative because short term debt dominates the liabilities of banks in Ghana. The result is statically significant at 1% significance level and shows that banks reliance of debt financing in

Ghana reduces their profitability. The results suggest that banks should either focus on equity financing. However, if they have to use debt, they must focus of long-term debt and reduce their overreliance on short term financing.

On the macroeconomic variables, inflation and exchange showed a negative relationship with ROA while GDP has a positive relationship with ROA, however all the macroeconomic variables showed a statistically insignificance relationship with ROA which means the relationship does not really exist.

Table 4 Panel Unit Root

Variable	Method					
	LLC			ADF		
	Statistic	Prob.	Order	Statistic	Prob.	Prob.
D(GDP)	-1.86148	0.0368	1	-1.712346	0.0000	0
EX	-0.12536	0.0206	0	-1.79873	0.0000	0
D(IF)	0.769242	0.0000	1	-3.45439	0.0000	0
STD	-0.70161	0.0000	0	-3.67873	0.0212	0
LTD	-1.97242	0.0000	0	-4.21259	0.0000	0
TD	0.132567	0.0000	0	-0.90475	0.0000	0
ROA	-2.00239	0.0818	0	-1.88456	0.0000	0
ROE	-0.00745	0.0432	0	-2.36844	0.0095	0

Source: author's computation, 2022.

4.2 Stationary Test

To test stationarity of the time series Augmented Dickey Fuller test statistic and Philips- Perron test statistic is employed. These tests belong to a category called Unit Root Test which is the proper way of checking stationarity in time series. When there is an existence of unit root it indicates that the time series is not stationary.

In this study, the researcher adopted the Levin-Lin-Chu (LLC) (2002) and the Augmented Dickey-Fuller panel unit root to analyse the stationarity of the various variables to be used in this study. Based on the stationary test results obtained from Table 4 above, it is shown that all the variables have a stationary characteristic since the null hypothesis of the various unit root are rejected.

Table 5: Panel regression results for ROA and ROE

Variables	Panel Results ROA	Panel results for ROE
(Constant)	-1.856	12.377
IF	-0.084 (0.091)	0.061*** (0.608)
GDP	0.522 (0.000)	-0.494 (0.000)
EX	-0.649*** (0.211)	-0.684*** (1.408)
StD	-10.12893** (5.0676)	-6.30113**(5.554)
LtD	-9.0941 (5.08879)	-7.2273** (34.232)
TD	13.986669* (5.07099)	-3.21435** (34.564)
R Squared	0.674435	0.609
Adjusted R Squared	0.659636	0.527
F-statistic	45.57473	7.459
Prob(F-statistic)	0	0.000
Durbin-Wastson	2.665	

*** Significant at 1%, **Significant at 5%, * significant at 10%

Source: author's computation, 2022.

The regression results from the table 5, with regards to ROA, it shows a R-square of 67.4% which suggest that the independent variable can explain only 67% of the variations in the dependent variable.

It shows that both short term debt and long-term debt ratios have statistically negatively relationship with Return of Asset (profitability) of banks in Ghana. The relationship suggests that an increase in either short term debt or long-term debt of

their capital structure it would lead to a reduction of the profitability of banks in Ghana. This result is consistent with the study by Abor (2008), Akoto and Gatsi (2010), because each these studies were conducted on the financial sectors on the Ghanaian economy. Both short-term debt and long-term debt are significant at 5% significance level. Total debt ratio had a positive relationship with bank's profitability at a 10% significance level. The result suggests that an increase in debt financing will increase the profitability of banks' profit.

The macro-economic variables such as inflation and exchange rate indicated a negative relationship with ROA, but only the coefficients of exchange rate showed a statistical significance negative relationship at 1 percent significance level, meaning that an increase in the instability of the exchange rate that the Ghanaian currency is exchange of other currency affect the ROE of banks in Ghana, while the other micro-economic variable, GDP, showed a statistically insignificant positive relationship with ROA.

Durbin-Watson Statistic (D-W Statistic) showed a coefficient value of 2.6 which indicates that the problem of autocorrelation of the errors terms which is sometimes a challenge in panel data methodology is not serious in the ROE regression estimates.

The *F*-test which shows the global usefulness of the model indicated an appreciable goodness of fit. In other words, the *F*-statistics prove the validity of the estimated models is statistically significant at 1 percent as shown with a probability of 0.00.

With respect to ROE, the adjusted R-Square is 0.609 means that the independent variable explains 60% of the variations in the variations in dependent variable meaning that the independent variables have a low explanatory power. The overall *F*-Statistics which measure the fitness of the model had a probability coefficient of 0.00 meaning that the model is well fit.

The results from this model using return on equity as a measure of banks profitability showed similar results with regards to the three main independent variables where short-term debt ratio and long-term debt ratio showed a negative relationship with banks' profitability while total debt ratio had a positive relationship with banks profitability in Ghana. However, from the table above it shows that only short-term debt ratio and total debt ratio showed a statistical significance relationship with ROE at 5 percent significance level.

On the macroeconomic variables, Inflation had a statistically significant positive relationship with return on equity (ROE) at 10 percent significance level, while Exchange rate and GDP showing a negative relationship with return on equity with only the coefficient of exchange rate showing a statistically significance negative relationship at 10 percent, while GDP shows an insignificant negative relationship with ROE. This shows that there is no relationship between profitability (ROE) of banks and GDP of banks in Ghana.

4.3 Discussion

4.3.1 The following hypotheses were discussed for the capital structure

H1: Financial performance has a relationship with short –term debt ratio of listed banks in Ghana.

From the regression results in Table 5, given a p-value 0.01 indicates that there is a relationship between financial performance of listed banks in Ghana and short-term debt ratio since the p-value is less than 5 percent, thus the null hypothesis is rejected. The relationship is statistically significant at 5 percent significance level. From Table 5 short-term debt shows a statistically significance with both ROA and ROE at 5 percent significance level. The results in this regard confirms hypothesis 1 which

states financial performance has a relationship with short –term debt ratio of listed banks in Ghana. However, the relationship is a negative one which implies that the financial performances of the banks are inversely associated to the short-term debt components of their capital. This finding is not in consistent with the free cash flow theory simply because, the assumptions underlying the theory are not the same in the case of the economy of Ghana. However, this result is inconsistent with the study by Gatsi and Akoto (2010), which suggests that relationship between debt and returns on assets do not exist in the banking industry in Ghana. The reason for the negative relationship between short-term debts in influencing returns on equity is as a result of increasing costs of doing the business of banking in emerging economies including Ghana. The resultant effect of this is that, all other things being equal, it reduces profits which could have gone to shareholders.

H2: Financial performance has a relationship with long–term debt ratio of listed banks in Ghana.

In the case of hypothesis 2, with p-value ($p=0.01$) less than acceptable level of 5 percent, we reject the null hypothesis and state that financial performance of listed banks has a statistically significant relationship with long-term debt ratio but the relationship is negative. This finding, however, is inconsistent with the assertion of M&M propositions II that the capital structure of companies has no relationship with the value of the firm. With respect to return on asset the findings revealed that there exists no relationship between long-term debt and financial performance of listed banks in Ghana.

This result is however consistent with previous studies like Gatsi and Akoto (2010) and Musah (2007). Results from both studies revealed that there exists a statistically insignificance relationship between return on asset and long-term debt. Musah (2017)

and Adesina *et al* (2015) established that firms use a relatively lesser amount of long-term debt to time their activities relative to short-term debt. Musah (2017) indicated that there is an inverse relationship between company profitability and long –term debt to capital ratio. It should however be noted that Adesina *et al* (2015) observed a positive association between long-term debt and a firm’s profitability contrary to the result of this study.

H3: Financial performance has a relationship with total debt ratio of listed banks in Ghana.

On the other hand, in hypothesis 3, the relationship between total debt ratio and ROE and ROA is statistically significant at 10 percent and 5 percent respectively which means that financial performance has a statistically significance relationship with total debt ratio of listed banks in Ghana and that the null hypothesis is rejected. The relationship established by the study is a negative with financial performance such that whenever listed banks in Ghana increase their total debt component in their capital structure, their financial performance and vice versa. The result is similar to the findings by Gatsi and Akoto (2010) and Abor (2008) because each these studies were conducted on the financial sectors on the Ghanaian economy. However, for Gatsi and Akoto (2010) net profit margin was used as a measure of profitability.

The result shows that debt financing increase the profitability of banks in Ghana but maybe with the right combination of debt.

H4: Financial performance of listed banks has a relationship with the rate of inflation.

From Table 5, the null hypothesis 4 is rejected and state that inflation has a positive relationship with the financial performance of banks in Ghana at a significant level of 5 percent with p-value of 0.016 which is less than 5 percent indicating that, indeed the

level of inflation directly influences the pattern of financial performance in the insurance sector of Ghana. Contrary to the study by Owolabi (2017), it was revealed that the effect of inflation on financial performance of manufacturing firms in Nigeria is not significant. This of this contradiction is the study was done on manufacturing companies. Otambo (2016) also found that the relationship between inflation and financial performance of firms in Kenya to be statistically insignificant. However, similar to this result is the study by Gado (2015) which indicated that collectively macroeconomic variables such as inflation, GDP, exchange rate have significant impact on financial performance of firms in Nigeria.

H5: Financial performance of listed banks has a relationship with the rate of gross domestic product.

On the other hand, the null hypothesis of hypothesis 5 is accepted and state that financial performance of listed banks has no relationship with gross domestic product, this is because Table 5 indicated that the relationship between GDP and financial performance of listed banks in Ghana is statistically insignificant and with a p-values of 0.725 greater than the acceptable value of 0.05 thus ($p > 0.05$). The alternate hypothesis is rejected because of the statistically insignificant nature of the relationship established. This means that any change in GDP on Ghana's economy will not have any effect on the financial performance of banks in Ghana. This is consistent with Rao (2016) who found a statistically insignificant relationship between GDP and financial performance of the energy and petroleum sector in Nairobi Stock Exchange. However, Otambo (2016) found that the GDP significantly affect financial performance of in Kenya positively.

H6: Financial performance of listed banks has a relationship with the rate of exchange rate.

Finally, Table 5 revealed that there is a negative relationship between Exchange rate and financial performance of banks in Ghana at 1 percent significance level, meaning that the null hypothesis is rejected at 1 percent significance level. The result is inconsistent with the study by Gado (2015), in a study on the influence of economic factors on firm performance in Kenya. In the study exchange rate was found to have statistically insignificant relationship with financial performance.

However, in a related study on Ghana, Gatsi (2012) found that, foreign exchange rate negatively influences the performance of listed banks in Ghana. This conclusion was reached after embarking on a cross sectional data covering 2002 to 2011. This result means that the level of exchange rate adversely affects the financial performance of banks in Ghana.

4.4 Chapter summary

This chapter presents the result of the study and discussed the findings of the study. Quantitative approach was adopted for the study. Correlation matrix was used to identify the strength of the relationship that exist between the variables. Panel regression model was used to analysed the data. The panel regression results showed that there exists an inverse relationship between capital structure (short term debt ratio and long-term debt ratio) and profitability of banks except total debt ratio which had a positive relationship.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.0 Introduction

The research investigated the relationships that exist among financial performance and capital structure of listed banks in Ghana. The researcher analysed the financial statements of these banks. This chapter presents the summary of all the findings, general conclusions and recommendations.

5.1 Summary

The purpose of the study was to evaluate the relationship between capital structure ratios and financial performance of listed banks in Ghana. The study covered 12 listed banks over the period 2010-2020. Panel data methodology was adopted and the major findings of the study are summarized below:

First of all, it was identified that 77 percent of banks in Ghana are financed through short-term debt and 84 percent of total capital of banks in Ghana is made up of debt. Of this, 77 percent represent short-term debts while just 6 percent is made up of long-term debts. This finding is corroborated by studies done by Abor (2005) and Amidu (2007) on related sectors in the Ghanaian economy like the banking sector.

The panel regression results showed that there was an inverse relationship between capital structure (short term debt ratio and long-term debt ratio) and profitability of banks except total debt ratio which had a positive relationship. The results of the study confirm the pecking order theory which argues that more profitable firms will prefer to use internally generated funds to debt and as such there is a negative relationship between leverage and profitability.

Inflation which is one of the significant macroeconomic variables and transcend across all facet of the economy was found to have positive influence on the financial performance of insurance companies in Ghana and was statistically significant.

Unlike inflation, exchange rate revealed a significantly negative relationship with financial performance of banks in Ghana. This implies that exchange rate adversely affects the financial performance of banks in Ghana hence banks in Ghana.

Finally, GDP which was used as a controlling variable in the study resulted in an insignificant negative relationship with the financial performance of the banks in Ghana. This means GDP has no influence of financial performance of banks in Ghana that banks in Ghana should not worry about the changes in GDP of Ghana's economy.

5.2 Findings

After analysing and discussing the data, the study revealed the following findings:

1. Short-term debts, long term debts, and total debt are all statistically significant in determining returns on equity (profitability) of listed banks in Ghana.
2. Short-term and total debt are statistically significant in determining return on asset (ROA) in the while long-term debt is statistically insignificant in determining return on asset of listed banks Ghana.
3. Inflation rate influences the financial performance of the banks in Ghana positively.
5. Exchange rate also indicated an adverse influence on the financial performance.

6. GDP also showed a negative relationship with financial performance however the relationship is not statistically significant hence no relationship exists between financial performance of banks in Ghana.

5.3 Conclusions

In conclusion, the finding of the study suggests that capital structure had significant impact on financial performance of banks. This implies that managers need to consider this impact in their financing or capital structure decision.

Short-term debts, long term debts, and total debt are all statistically significant in determining returns on equity (ROE), but only short-term debt and total debt are statistically significant in determining return on asset (ROA) of listed banks of Ghana.

In relation to the macro-economic variables which were used as controlling variables in the study, inflation rate influences the financial performance of the banks in Ghana positively such that when the level of inflation raises their performance level also increase therefore banks need to adopt strategies whenever there are projections of increases in the level of inflation in the future to improve on their financial performance. The other macro-economic variables such as exchange rate also indicated an adverse influence on the financial performance hence banks should be mindful especially in the case of exchange rate not to hedge against any exchange rate risks since it would adversely reduce their financial performance.

GDP also showed a negative relationship with financial performance however the relationship is not statistically significant hence no relationship exists between financial performance of banks in Ghana thus can be concluded that GDP of Ghana's economy and can conclude GDP poses no threat on financial performance of banks in Ghana.

The study also found that profitable banks in Ghana use less debt and depend more on internal sources of financing thus supporting the pecking order theory.

5.4 Limitations of the study

The researcher limited this study to only Listed Banks in Ghana which have their financial statements with the Bank of Ghana covering the period of 2010 to 2020. Savings and Loans Companies, insurance companies, and Micro-Finance Companies were also not included in this study. As a result, the findings cannot be generalized to all the financial sector of the economy but are limited to the banking sector because of how the banking sector has undergone reforms in Ghana over the years.

The study was also restricted to only secondary sources of data. The study considered the use of the financial data, the computation of financial performance, and leverage ratios of listed banks in Ghana.

5.5 Recommendations

The following are suggested for further research:

This current study has added to the myriad empirical evidence that the Modigliani and Millar Propositions were not applicable in the practical insurance sector in the Ghanaian context. Therefore, this study strengthened the view kept by many financial experts that the Modigliani and Miller Propositions, which challenged that capital structure has no impact on a firm's value, was not applicable in an imperfect market with corporate taxes or any costs associated with trading securities.

For practitioners, this current study shows that financial performance of banks in Ghana are influenced by the capital structure practiced by these banks. Therefore, the management of bank must ensure optimal policies to increase profitability of the banking sector.

The study further recommends that management of banks must have an efficient and effective credit policy that improves the performance level and credit policy should contain upper and lower limits of taking credit or debt to reduce finance cost. As high finance cost would adversely affect their financial performance, managers must always be alert on the level of debt to equity so as not to affect profitability negatively.

The study further recommends that top management must decide the amount of debt taken and annual interest paid. Finance must be optimal to reduce tax burden but should not cross the limit that it hampers profitability of the company.

Banks in Ghana must not only be interested in mobilizing deposits but must also be concerned with utilizing these deposits effectively and efficiently. To achieve this, the banks must set competitive lending rates that would not deter customers assessing loans. Efforts must also set policy that aims at always demanding collaterals from customers before loans are granted.

For policy makers, it is recommended that Government through Bank of Ghana put in effort to formulate comprehensive policies that will help to develop bond market so that banks in Ghana can raise a lot of long-term debt which they need to meet their short to medium term loan operations.

Bank of Ghana must continue to monitor the activities of banks in Ghana in terms of capital structure practice.

The government, through Bank of Ghana, Reduce the exchange rate policies to one when the exchange rate is unfavourable to Ghana to avoid making losses.

5.6 Areas for further studies.

The current study analysed the relationship that exist between financial performance ratios (ROA and ROE) capital structure ratios (short term debt to equity, long term debt to equity and total debt equity), future studies can include other financial performance indicators such as net profit margin and return of capital employed to their study.

The study can be extended to look at other firm specific variables such firm size, ownership, firm age and growth for the study.

Future studies can also include macroeconomic variable such as interest rate and GDP growth to the study.



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