# UNIVERSITY OF CAPE COAST

# CAPITAL STRUCTURE AND FINANCIAL PERFORMANCE OF SELECTED

# FINANCIAL INSTITUTIONS IN SEKONDI TAKORADI METROPOLIS



Dissertation submitted to the Department of Accounting of the School of Business, College of Humanities and Legal Studies, University of Cape Coast in partial fulfillment of the requirements for the award of Master of Business

Administration degree in Accounting.

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## DECLARATION

## **Candidate's Declaration**

I hereby declare that this dissertation is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature..... Date .....

Name: Daniel Edwin Dosu

## **Supervisor's Declaration**

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

Supervisor's Signature ...... Date ......

Name: Mr. Patrick Darkwa

#### ABSTRACT

The problem of business collapse typically among the financial institutions in Ghana as a result of financial distress, is real and thus calls for scientific research into the relatedness of business capital to performance. The current study therefore seeks to contribute to bridging the literature gap in an attempt to establish the relationship and the extent of impact that capital structure has on the performance of selected financial institutions operating within the Sekondi Takoradi Metropolis. Empirical evidence shows some relationship between capital structure and financial performance of financial institutions, for which the relationship could be positive or negative. This study established that all the financial institutions operating in Sekondi Takoradi Metropolis operate with a mix of debt and equity capital but most of them have low gearing issues. EPS showed a positive correlation with capital structure while ROA and ROE showed inverse relationship with capital structure. It was further observed that capital structure displayed some level of impact on ROA, ROE and EPS but the impacts were not significant. Overall, the study concluded that capital structure has both positive and negative impact on the performance of financial institutions. It could be concluded that capital structure has no statistically significant relationship with firm performance in respect of ROA, ROE, and EPS. It is recommended that the board of directors and management of the institutions must ensure prudent decisions on capital structure that yields the best of positive returns.

# **KEY WORDS**

Capital structure

Debt

Earnings per share (EPS)

Financial institutions

Return on asset (ROA)

Return on equity (ROE)



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# **DEDICATION**

To my lovely wife Comfort and children: Edwin, Edmund, Selikem and James.



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1 Research Conceptual Framework



#### **CHAPTER ONE**

## INTRODUCTION

The study seeks to carry out a scientific analysis to determine the significance of the types of capital (debt or equity) on the firms' financial performance and thus, establishing which of them exerts greater pressure on the firms' finances. Research holds that firms' capital structure has an influence on their financial performance (Alrafadi & Md-yusuf, 2014), and thus underscores the need for optimum utilization of any form of capital to maximize organizational returns in terms of profit.

It is important to note that debt or equity financing has implications on profitability measures of firms and firms' characteristics among other things and may determine which proportion of debt-equity source of financing a firm is ideal. The current study seeks to provide insightful theoretical knowledge, shaping the perceptions and misconceptions about any particular form of business financing and practically guides the choice of any form of capital structure deemed suitable for a firm's circumstances.

## **Background to the Study**

The number of studies on capital structure has steadily increased over time, and researchers are still interested in deciding if there is an ideal equity and debt mix. The ideal capital structure is a mix of equity and debt capital that reduces a company's cost of capital while increasing its valuation (Akintoye, 2009). Ironically, how companies decide on the proportions of debt and equity in their capital structure mix is still a mystery.

The capital structure of an entity, which refers to its financing structure, is a topic that continues to pique the interest of accounting and finance researchers (Brounen & Eichholtz, 2001). One of the most perplexing topics in corporate finance literature is this one. Its importance stems from the fact that capital structure is inextricably related to an organization's ability to meet the needs of its stakeholders.

Capital structure, according to Abor (2008), is the unique combination of debt and equity that a company uses to fund its operations. Publicly traded shares, private placements trade debt, bank debt, lease arrangements, pension liabilities, tax liabilities, outstanding pay to workers and management, performance assurances, contingent liabilities, and other commodity warranty are all examples of capital structure.

The relationship between different sources of long-term funding, such as equity capital, preferred share capital, and debt capital, is often referred to as capital structure. The required capital structure is an essential financial management decision because it is linked to the company's valuation (Paramasivan & Subramanian, 2009). Many factors influence a company's success when deciding on a capital structure and debt maturity structure. The debt maturity would have an effect on a company's investment options. Furthermore, the tax rate has an effect on the company's efficiency. Examining the effects of capital structure variables on the basis of a company's results would be a performance test of a company due to the capital structure's influence in this situation (Zeitun & Gang Tian, 2007).

Regardless of whether it is a newly created organization or one that has been in existence for a long time, every entity needs finances to facilitate its operations. Many businesses need funds to expand or provide working capital for day-to-day operations. Working capital is the term for this type of funding. Internally generated funds are typically collected from retained earnings and do not result in an obligation to pay interest. However, according to Akintoye (2009), organizations with externally produced capital face the burden of repaying creditors through interest payments (Chechet & Olayiwola, 2014). Capital structure, according to Shubita and Alsawalhah (2012), is a mix of equity and debt that businesses use to make their operations run more smoothly.

A company may raise money by selling securities, debt, or borrowing money from sources like convertible bonds, preferred stock, and debentures (Akintoye, 2009). Making the right capital mix decision is critical because capital structure has an effect on asset maximization and a firm's ability to survive in a competitive market. Akintoye goes on to say that variables like yield, income, progress, and customer satisfaction can be used to calculate an entity's efficiency. Financial efficiency is calculated using profitability ratios such as Return on Assets (ROA), Retained Income (RI), and Return on Investment (ROI) in most financial management studies (Zeitun & Gang Tian, 2007). Firm goals play a significant role in deciding which profitability ratio should be used.

Managers try to figure out which mix of debt and equity can increase profitability and the firm's market value. Huang (2006) defines the ideal capital

structure as a mix of debt and equity that reduces a company's cost of capital while also increasing its profitability and market value.

Various capital structure and financial performance studies have been conducted, with the goal of establishing a connection between increased debt usage in capital structure and financial performance (Akintoye, 2009; Huang, 2006). Some of these studies reveal a shaky or non-existent connection between company leverage and financial results (Ross & Harmsen, 2001). Others have found that capital structure has little or no effect on a firm's performance, and that capital structure is not the only metric for measuring financial performance and making financial decisions (Zeitun & Gang Tian, 2007; Serghiescu & Văidean, 2014).

### **Statement of the Problem**

There has been a lot of research on capital structure as a topic, with a lot of it focusing on the determinants of capital structure (Antwi, Mills, & Zhao, 2012; Akeem, Terer, Kiyanjui, & Kayode, 2014), but little on the relationship between capital structure and financial institution efficiency. According to Akintoye (2009), an organization with more debt funding than equity faces gearing-related implications and therefore performs poorly.

Studies like Cassar and Holmes (2003), which connected capital structure to financial institution performance in Australia, have not been as popular in Ghana, where banks and insurance companies traditionally operate in the Sekondi Takoradi Metropolis. The few studies available have not been exhaustive in terms of empirical analysis to determine the significant impact each type of capital (debt or equity) has on firm value (EPS) and management efficiency (ROA) as performance

measures, and thus which one exerts greater pressure on the firms' finances (Abor, 2005). While this quantitative research focused on capital structure and profitability, it only looked at companies listed on the Ghana stock exchange, whereas the current study looks at unlisted companies.

Nonetheless, the problem of business failure in Ghana, especially among financial institutions, as a result of financial distress is real, necessitating scientific research into the relationship between business capital and efficiency. As a result, the current study aims to fill a void in the literature by attempting to develop the relationship between capital structure and the performance of selected financial institutions operating within the Metropolis.

## **Purpose of the Study**

The study seeks to examine the relationship between capital structure and the overall performance of financial institutions in Sekondi-Takoradi Metropolis.

### **Research** Objectives

The study sought to achieve the following specific objectives:

- 1. To establish the extent of financial gearing (percentage of debt and equity components of the capital structure) of selected financial institutions.
- 2. To examine the relationship between capital structure and profitability (ROA) of selected financial institutions.
- To examine the relationship between capital structure and profitability (ROE) of selected financial institutions.
- 4. To determine the extent to which capital structure impacts on corporate value (EPS) of selected financial institutions.

## **Research Question**

Research question was formulated for objectives one as; What is the extent of financial gearing (percentage of debt and equity components of the capital structure) of selected financial institutions?

## **Research Hypothesis**

Research objectives two, three and four were hypothesized as;

- 1. Debt-Equity ratio positively and significantly correlates with Return on Assets (ROA) of selected financial institutions
- 2. Debt-Equity ratio positively and significantly correlates with Return on Equity (ROE) of selected financial institutions.
- 3. There is no significant impact of Debt-Equity ratio on corporate value (EPS) of selected financial institutions.

## Significance of the Study

Managers and board of directors (BOD) of financial institutions will benefit from the study in developing effective policies and decisions about sources of business financing. The study is expected to emphasize the connection between a firm's capital structure and financial results, which is critical for the institution's survival and development. The thesis will also serve as a source of reference material for potential scholars on the subject and related subjects, as well as other academicians conducting similar research.

## Delimitations

Geographically, the study was conducted on financial institutions that operate within Sekondi Takoradi Metropolis. Specifically, financial institutions covered in this study are banks (rural or commercial) and insurance companies. All foreign financial institutions were excluded from the study as well as other nonbanking financial institutions such as savings and loans, micro-finance institutions and credit unions. In context, however, the study assessed the debt and equity financing sources of business and their relationship with key performance indicators of such business entities with particular reference to ROA, ROE and ROI (as performance indicators).

## Limitations

The analysis has some drawbacks due to its use of only a quantitative research approach. The quantitative approach does not allow for a comprehensive understanding of the research issue by exploring the qualitative aspect, but it is useful since it estimates the relationships between and among variables.

## **Definition of Terms**

*Capital Structure:* The capital structure of a company is the mix of different sources of funding (debt and equity) (Barton & Gordon, 1987).

*Return on investment (ROI)*: is a ratio that shows how effectively a company earns on its assets by dividing net profit by total assets (Gul, Irshad & Zaman, 2011). Return on equity (ROE): is a metric that calculates how much money a company makes on the money it invests in its capital structure. It is determined by dividing net profits by shareholder equity (Viviani, 2008).

*Earnings per share (EPS)*: is a measure for assessing a company's success and comparing results over time (Monczka, Petersen, Handfield & Ragatz, 1998).

*Equity* refers to a shareholder's equity interest in a business, such as common and preferred stockholders. The net worth is calculated by subtracting total assets from total liabilities.

*Debt is* a debt: under which a company borrows a certain sum of money at a fixed interest rate under the terms of a contract with the obligation to repay at a certain date (Viviani, 2008).

*Debt equity ratio* - This ratio indicates how much of a company's capital structure is backed by debt or by owner's equity (Viviani, 2008).

## **Organisation of the Study**

The research report was organized into five chapters. Chapter One introduced the entire study covering the background of the study, statement of the problem, significance, the main purpose and objectives of the study. Again, the chapter stated the research hypothesis that guided the achievement of the objectives. Profile of the study area and the scope of the study was captured in this chapter.

Chapter Two dealt with the review of relevant literature beginning with the theoretical background. Empirically, this chapter reviewed literature on the concept of capital structure, debt and equity financing, overall performance and the relationship between capital structure and performance of financial institutions.

The third chapter presented the methodology employed to collect and analyse data for the study covering the research design, population, sample size and

sampling techniques, data collection tools and procedures. Furthermore, this chapter outlined the data analysis procedure for the study.

Chapter Four focused on data presentation, analysis and discussion of result based on key study variables, relating them to available empirical evidence. Key research findings were summarised in Chapter Five, where conclusion and recommendations were made for stakeholders' attention to end the study report.



### **CHAPTER TWO**

## LITERATURE REVIEW

## Introduction

This chapter presents a review of related studies on the topic. The chapter is organized in various sections. First section presents the theoretical review, followed by the conceptual review which covers concepts including capital structure and firm performance. The chapter also explains the conceptual framework underpinning the study.

## **Theoretical Review**

A theory is a reasoned statement or a group of statements that are supported by evidence meant to explain some phenomena. Theoretical framework is therefore a collection of interrelated areas of studies and models which guide research, determining what things will be measured and statistical relationships of it. As Armstrong and Kotler (2005) described, theoretical framework is a collection of interrelated concepts that guide a research work, determining the items for measurement and the statistical relationship being studied. Theoretical frameworks are critical underpinning of an academic study by providing vision and direction for the study. The current study makes use of the stewardship theory, trade-off theory, and agency theory.

## Stewardship theory

The stewardship theory of capital structure recognizes management of organizations as stewards. In exercise of its roles, management seeks to spearhead

its goals and integrates that with organizational policies developed by the board of directors or governors of the organization. The stewardship theory emphasizes the role of management as stewards of stakeholders' interest in an organization vested into their care, integrating their vision, policies, programmes and goals as part of the organization (Munene & Guyo, 2013). The theory maintains that a steward (management) protects and maximizes shareholders' wealth through business performance to reflect the maximization of management's (steward's) utility functions.

Explaining the provisions of the stewardship theory, Karim, Chan and Hassan (2010) posited that stewardship theory recognizes the importance of a workable governance structure that empowers stewards (management) and accords them optimum autonomy based on trust. Karim et al. asserted that the need for reasonable degree of autonomy for management and employees alike without compromising sense of responsibility and commitment to duty, to ensure minimum level of waste, negligence and thereby maximizing stakeholders' interest.

In a description, Kumbirai and Webb (2010) asserted that stewards display their utility function towards optimum achievement of shareholders' interest through high performance. Supporting the provisions of Kumbirai and Webb are also of the view that stewardship theory admits the importance of organizational governance structure that helps stewards to effectively function with appreciable level of trust.

Stewardship theory is sufficiently relevant and related to the current study of financial structure and financial performance relationship because the board,

operational management and employees are stewards who take custody of customers' deposits. These stewards are expected to function judiciously to maximize stakeholders' wealth. To realise this dream however, Khalid and Amjad (2012) opined that management of financial institutions must endeavour to explore and employ capital funding that maximises profit rather than to deplete the returns the firms make.

## Agency theory

Among the theories commonly found in studies relating to capital structure and firm performance include the agency theory popularly postulated by Jenson and Meckling (1976). The agency theory posited that providers of business capital are held as principals whilst management of such firms are also held as agents. Therefore, proponents of Agency theory hold that there is a very important relationship between the principal capital providers (Principal) and the management (Agents) who are mandated to act on behalf of the principals (Nimalathasan, 2008).

Nonetheless, firm managers (agents) are sometimes found pursuing their best interest other than the capital providers or shareholders. This, according to Munir, Ramzan, Rao, Ahmad and Raza (2012), bred conflict between the two parties described as agency problem. Elaborating on their assertion, Munir et al. reported that the main interest of shareholders is to maximise wealthier dividend when managers do not invest free cash in any non-profit-making initiatives. Agency theory further justifies the existence of agency problem on the grounds that

ownership of firms (shareholders) and control of it (management) fall on different hands, particularly as seen with the banking business.

Studies support the use of debt financing as a practical approach to mitigate agency conflict where managers will have the least motivation to apply maximum efforts that service their personal gains (Huang, 2006). Pouraghajan, Malekian, Emamgholipour, Lotfollahpour and Bagheri (2012) therefore, concluded that the agency theory advocates for debt financing of public commercial business such as the financial institutions as a tool to control and restrict managers who pose to be opportunists. The use of debt financing reduces free cash flow by the payment of fixed interest and again makes managers shun non-profit investment, but work towards shareholders' interest.

## **Trade-off theory**

The Trade-off theory recognises the existence of cost and benefits with a firm's use of debt financing. The theory holds that firms that finance their capital with debt have the advantage of benefiting from tax shield but suffers bankruptcy cost and financial distress cost. In concord, Taani, (2013) observed that as firms increase their debt financing the marginal tax benefit declines whilst the marginal cost increases. In essence, the researcher hypothesised that a firm's optimal capital structure is attained from the trade-off between the corporate tax benefit on one side, and agency bankruptcy cost respectively on the other side.

Mwangi and Murigu (2015) advised that, financial institutions must apply the cost and benefit balancing wheel in choosing how much of debt or equity financing on their capital structure. Ideally, firms must seek an amount of debt that

balances the tax benefits of additional debt against the likely cost of financial distress that might lead to bankruptcy. The trade-off theory describes a firm's optimal capital structure as the blend of business financing that equates the marginal cost and benefits of debt (Mwangi & Murigu).

In summary, the three theoretical perspectives are relevant in the current study of capital structure because they all border on the use of debt and equity financing. The stewardship theory admonishes for integration of managers' and shareholders' interests and is guided to effectively manage business resources (which in this case include capital) to maintain trust. The relevance of Agency theory is also established in its application that financial institutions could employ debt financing to resolve agency conflict emanating from principal-agent relationship. The use of debt financing restricts the opportunistic behaviour of managers as agents by reducing the flow of free cash for non-beneficial investments against shareholders' interest.

The Trade-off theory submits and advices organizations, including financial institutions to weigh the cost and benefits of issuing debt financing to obtain optimal capital structure that yields better financial performance. On any of these premises, Mireku, Mensah and Ogoe (2014) reiterated that high organizational performance is at stake.

## **Conceptual Review**

The current study builds its conceptual base from the review of literature on the overview of capital structure and the components of capital structure. Also covered included the concept of financial performance and its measures, as well as the relationship between capital structure and financial performance of financial institutions.

## **Overview of capital structure**

Every business entity small or big, new or old requires finances whether as working capital for facilitating day-to-day operations. In this light Saeed, Gull and Rasheed (2013) remarked that the significance of funds in business cannot be overemphasized. In real business life capital may either be sourced internally or externally. The internal source of funding, according to generated from retained earnings and does not hang upon the firm any obligation of repayment of any form.

However, for the external source of funding, as explained in Saeed et al. (2013), firms are left with an obligation to compensate the borrower (creditor) by way of interest payment. Nonetheless, it is intimated that start-up businesses might source capital financing from some sources other than retained earnings. Studies (Kyereboah-Coleman, 2007) recognised such sources as personal savings, support from family and friends which may or may not necessarily bring interest burden unto the firm.

Issues relating to capital structure is one of the critical decision areas among organizational financing policies. Boateng (2004) described capital structure of a firm as the combination of debt financing (including preference shares) and equity. To maximize returns to shareholders and for sustenance within the competitive market, decision taking on a firm's capital structure is considered very fundamental. Margaritis and Psillaki (2010) justified this submission and states that choosing a

combination of debt and equity financing for established optimal capital structure is a crucial task confronting managers. Optimal capital structure minimises cost of capital and thereby improving returns to owners of the business.

Chen (2004) also explained capital structure as the composition of firm's liabilities to providers of business financing outside the organization and the equity financing sourced from shareholders or a hybrid of the two. If the entire capital of the firm is financed by share issue then, the profits so accrued to the firm goes to shareholders. Shareholders and creditors, therefore, enjoy benefits from business profits for the capital they have provided. From a similar perspective, Frank and Goyal (2003) described capital structure as the specific mix of debt and equity financing employed to finance operations of an organization and thus, associate corporate failure with the financing behaviours of firms in general.

Studies have disclosed that most corporate assets are financed from firms' capital structure which often includes the use of sources such as bank debts, leasing contracts, publicly issued securities, trade debts and other product warrantees (Saeedi & Mahmoodi, 2011). In support, Abor (2008) also included pension liabilities, performance guarantees, unpaid employees' compensations and tax liabilities as sources to beef up capital structure.

In a submission, Awunyo-Vitor and Badu (2012) further stated that firms that are lowly geared are described as financially fit and strong. Awunyo-Vitor and Badu expatiated that acquisition or accumulation of debt component in a firm's capital structure goes with loan pay off burden within a stipulated time which is taken care of from profit earned within the period. However, dividend pay off as a

result of equity finance is made upon shareholders' (beneficiaries) agreement and approval, and does not put undue pressure as compared with the debt obligation. In essence, Awunyo-Vitor and Badu admonished that the choice of capital structure is a financial decision of firms that require managers to take care of and be circumspect to decide on the appropriate mix of debt and equity.

The foregoing discussion and overview suggest that though firms by their nature and capital requirement might need to include both debt and equity on their capital structure, managers must take prudent decisions on the mix to ensure optimum benefits. Financing decision results in a particular capital structure, but more often than not sub-optimal financing decision often lead to corporate failure. For the purpose of the current study, the decision herein underscores that capital structure is relational to a firm's performance (typically financial performance) because sourcing capital is associated with some payments off earnings.

## **Components of capital structure relating to financial institutions**

It is clear from capital structure literature overview above that most firms, including financial institutions, have their capital structure composed of debt and equity. However, the proportions of debt and equity depend on the firm and usually differ among firms. Studies support that firms should not depend solely on one particular source of financing, arguing that incorporation of both sources of business financing is mostly ideal to raise capital (Ramadan et al., 2011).

Reiterating that capital structure is a composition of a firm's liability from debt or equity or both Sritharan and Vinasithamby (2014) posited that the value of a firm is affected by the firm's capital structure and thus require accurate calculation

to maximise a firm's profit as well as market value. The dilemma still remains for management and investors for the existence of optimal capital structure and its influence on financial performance. An appropriate response to the question of 'what is the right composition of the capital structure' has for a long time been the focus of attention for academic researchers and management of financial institutions (Sangmi & Nazir, 2010). Abbadi and Abu-Rub (2012) complemented the efforts of Sangmi and Nazir in the discussion of debt (long-term and short-term) and equity as the key components of capital structure of financial institutions.

A study on the relationship between capital structure and financial performance of one hundred companies in Pakistan (Umar et al., 2012) found out that all the three variables of capital structure, current liabilities to total assets, longterm liabilities to total assets, and total liabilities to total assets negatively impacted the earnings before interest and tax, return on assets, earnings per share and net profit margin.

## Debt financing source of firms' capital

Debt financing is the long-term borrowing firms make, but mostly employs long-term capital for large well-established firms including financial institutions (Onuonga, 2014). Debt financing is required at an interest on agreed fixed interest repayments within a stipulated time frame. Assessing the pros and cons of debt financing, Onuonga established the positive side of it as firms enjoy maximum tax benefit to favour increased profitability. However, Ebaid (2009) also reported that high levels of debt financing precipitates possible bankruptcy. In support of the Pecking Order theory, therefore, Ebaid suggested that financial institutions employ

debt financing as the last resort after they have exhausted the internal funding (equity and debt) and prove to be inadequate.

## Long-term debt financing

Admitting debt as a component of capital structure of financial institutions as in many firms, Amidu (2007) explained long-term debt as money borrowed for institutional expenditure and owed to lenders for a period more than one financial year from the date of acquisition/current balance sheet date. It is evident in literature (Amidu) that long-term financing has no significant relationship with returns on assets, but is most preferred among well-established corporate institutions by virtue of their asset base.

Interestingly, financial institutions mostly banks offer long-term business financing for other businesses and also access long-term financing from lenders. A report by the European Commission in 2008 (Economic, 2008) indicated that large financial banks considerably reduce lending to small and medium enterprises, and that resulted in reduced potential for growth and financial performance. Amidu (2007) therefore concluded that there is a direct positive relationship between longterm debts and financial performance of businesses (large or small), in terms of growth, sales effectiveness, and gross profit.

In their analysis on debt financing, Weinraub and Visscher (1998) indicated that aggressive liquidity policies combine higher levels of usually lowercost short-term debt with less long-term resources. While capital costs are lower, the risk of short-term liquidity is increased. They discovered that total and shortterm debt are both positively linked to a company's profitability, which may be the

most critical factor in obtaining outside funding in countries with lax collateral rules. They discovered a negative relationship between tangibility and short-term debt and a positive relationship between tangibility and long-term debt as a result of their research. These findings are in line with other capital structure hypotheses, which conclude that businesses without fixed assets to use as leverage are unable to obtain long-term financing. Short-term debt is positively associated with a firm's growth prospects, according to Garca-Teruel and Martinez-Solano (2007). Anecdotal evidence shows that short-term debt funding and financial results have a positive relationship.

### Equity financing source of firm's capital

The use of equity financing in almost all firms is evident in literature especially among financial institutions and other listed companies. Equity financing is the component of firms' capital acquired from business owners, thus representing owners' contribution to firm's capital which is often seen in the form of ordinary shares issued and the undistributed portion of profit retained to the organization (Ang et al., 2000).

Ebaid (2009) advanced the argument for the use of equity and states that by employing equity in their capital structure, firms are able to perform better because equity holders directly control management of operations. Because equity holders have claims from company profits, they ensure that resources are effectively allocated to maximise shareholders' wealth. Supporting Ebaid's argument, Mujahid and Akhtar (2014) established positive relationship between equity capital and financial performance of firms.

In a study of firms' equity-debt choices, Nimalathasan and Valeriu (2010) showed that firms that had high profit performance used higher levels of equity than debt. Corroborating the proposition within the Trade-off theory, Giorgis Sahile, Tarus and Cheruiyot (2015) also found in a study of 'debt capacity and capital structure' that the fear of bankruptcy and agency costs encouraged firms to prefer equity to debt financing. Invariably, the Trade-off theory encourages firms to use debt after cost and benefit analysis.

#### **Performance measurement**

Every business, by the purpose for which it was established, has a purpose to accomplish and the extent to which such purpose(s) is achieved describes its performance level. Performance is therefore a complex word because it has different meanings taken cognisance of many dimensions it can be looked from. Akintoye (2008) was of the view that entity's performance may be ascertained from the perspectives of productivity, growth, and customer satisfaction. In the analysis of firm performance, Fama and French (2002) gave credence to the Trade-off theory that capital structure must always have favourable Trade-off between financial risk and expected returns. Therefore, Fama and French consider business risk, taxes and management behaviour as crucial factors for determining an ideal capital mix for enhanced firm performance.

In Ayele's (2012) study of the subjective measures of firm performance, Ayele recognised organizational performance as the central outcome variable of interest that lie at the heart of survival. The author then described organizational performance as a set of financial and non-financial indicators capable of assessing

the extent to which organizational goals and objectives are achieved. Following an integrated literature by Dumont and Svensson (2014), a multidimensional construct used captured market share, sales revenue, innovation, and profitability performance measurement parameters. From the revenue point of view, Dumont and Svensson assert that performance demonstrates the maximization of shareholders' interest, and measures how better off shareholders are at the end of the period than they were at the beginning of the period. Complementing Dumont and Svensson's assertion, Lemma and Negash (2014) also explained that shareholders' main objective of investing in businesses is to increase their wealth.

## Liquidity as a performance measure

Liquidity performance is among the traditional and most widely practiced management tool considered in the measurement of financial performance. Mostly, researchers, academicians and professionals measure firm liquidity using current ratios, quick ratios and cash ratios (Akbarpour & Aghabeygzadeh, 2011). Liquidity measures the ability of a firm to meet its current financial obligations with the available current assets as they fall due in the short term without disrupting business operations.

Bank and other financial institutions by their core duty of deposit taking, must be capable of meeting their obligations when depositors order for or demand withdrawal. Taani (2013) submitted that financial institutions must maintain adequate liquidity because these institutions receive deposits and other funds to enable them also expand loans and investments beyond the use of only equity. Taani added that relevant computations in the form of ratios such as liquid assets

to total assets ratio, liquid asset to deposit ratio, and loan to deposit ratio are made to estimate firms' liquidity position.

The liquid asset to total ratio is considered in most studies as a direct method of assessing a firm's liquidity to reflect in general how much the firm's liquid asset is tied to its overall assets (Adewale & Ajibola, 2013). It is believed that the higher the ratio the higher the liquid proportion from the overall total assets, and the reverse holds. Liquid asset to deposit ratio is also one direct method of assessing a firm's liquidity especially, the financial institutions to indicate the proportion of short-term liabilities that can be serviced with the firm's liquid assets should there be any unplanned or unexpected demands for such liabilities (Adewale & Ajibola, 2013). One other solvency assessment, Umar et al. (2012) put across was the net loan to deposit and short-term borrowing ratio. This ratio indicates the proportion of total deposits locked up in non-liquid assets and thus, a higher result denotes the firm's prone to insolvency.

Explaining further, Umar et al. (2012) added that analysis of firms' liquidity otherwise called solvency helps to assess creditworthiness and investment possibility by an investor. The solvency measure or analysis is categorised as an external financial analysis as it makes use of financial reports such as income statement and cash flow that are published publicly for external analysts to assess.

## Profitability as a performance measure

The outcome-based financial indicators have been widely used to measure business profitability performance among financial institutions which assume the fulfilment of the economic goals of the firm. A number of literatures assert

profitability as the ultimate performance results that indicate the effects of firm policies by board of directors and management activities with the financial year (Shubita & Alsawalhah, 2012). Researchers mostly assess profitability performance based on return on equity (ROE) framework and span through other components such as return on assets (ROA), net profit margin (NIM), return on deposits (ROD), and assets utilization (AU) to identify strengths, weaknesses and the reasons for those.

*Return on Equity*– Return on equity shows the ability of a firm's management to utilize the shareholders' equity whether to improve the retained earnings or to keep the firm in good position. As a major bank profitability measure, ROE predicts how much the bank's earnings after tax covers its equity capital invested (Vong & Chan, 2009). Though high rate of ROE predicts management efficiency and profitability, find such performance as attributable to financial leverage (debt). ROE is ascertained by dividing net profit by shareholders' equity.

*Return on Assets (ROA)* – Return on assets indicates the profitability on the assets of the firm after all expenses and taxes (Vong & Chan, 2009). Return on assets estimates the ratio of current income (interest income, fees and other incomes) to net assets of firms. Agu and Okoli (2013) realised possible decomposition of ROA into ratio of net interest income to total assets (NI/TA); non-interest income to total assets (NII/TA); non-interest overheads to total assets (OV/TA) as well as loan loss provisioning to total assets (LLP/TA). Impliedly, net interest margin (NI/TA) helps ascertain the returns to savers and investors, and also
reflects the efficiency level of management's loan functioning (Agu & Okoli, 2013).

*Net Interest Margin (NIM):* Net Interest income is the difference between interest income and interest expenses. Net interest margin is calculated as the difference between interest income and interest expense. Therefore, Bourke (1989) indicated that NIM shows the gross margin on the banks loans and other investment activities. The higher the ratio the cheaper the funding or the higher the margin the bank is earning (Bourke, 1989). Net interest margin (NIM) is calculated as Interest income less interest expense divided by Total assets.

*Return on Deposit (ROD)* - Return on deposits is a measure of bank profitability performance. According to Alkassim (2005) the ratio reflects the bank management's ability to make use of customers' deposits for generating profit. Return on deposits (ROD) is calculated by: ROD = Net profit after tax / Total deposit.

### **Empirical Review**

# Capital Structure and firms' performance

The capital structure has a big impact on a company's success, and it's **NOBIS** important to both the company's managers and the capital fund providers. This is because if the capital structure elements (debt and equity) are mixed incorrectly, the firm's efficiency and survival can be jeopardized (Shubita & Alsawalhah, 2012). The relationship between capital structure and financial results is in the hands of a company's management and board of directors. The primary responsibility of the firm manager is to run the company in such a way that it maximizes shareholder

capital, which must be expressed in increased profits and cash flows (Shubita & Alsawalhah, 2012).

The capital structure decisions that a firm makes, and the decisions for either short-term or long-term funding, affect the profitability of a firm while also increasing the risk of the firm's investment ventures, affect the profitability of a firm. This is because debt and equity are also part of a company's capital structure, but debt raises the risk of potential profits while allowing a company to demand high returns" (Muzr, 2011).

Previous research on American businesses has shown that tying management and ownership together boosts profitability significantly (Akeem et al., 2014). The profitability of a company is determined by the behaviour of its managers; if they are successful, they will reduce the cost of capital and increase the company's efficiency. This is based on the principals' and agents' interests, because managers would often choose to follow their own interests by investing the available free cash flows rather than returning it to shareholders through dividend payments (Akeem et al.).

In their report on debt financing, Ramadan et al. (2011) proposed that aggressive liquidity policies combine higher levels of usually lower-cost short-term debt with less long-term resources. While capital costs are lower, the risk of shortterm liquidity is increased. They discovered that total and short-term debt are both positively linked to a company's profitability, which may be the most critical factor in obtaining outside funding in countries with lax collateral rules. They discovered a negative relationship between tangibility and short-term debt and a positive

relationship between tangibility and long-term debt as a result of their research. These findings are in line with other capital structure hypotheses, which conclude that businesses without fixed assets to use as leverage are unable to obtain longterm financing. Short-term debt is positively associated with a firm's growth opportunities, according to Ramadan et al. Anecdotal evidence shows that shortterm debt funding and financial results have a positive relationship.

### Effects of capital structure on firm's profitability

According to conventional capital structure theory, the best capital mix guarantees a low weighted average cost of capital, which maximizes market value per share. However, since several variables interfere with these relationships, leverage and equity ratios alone are insufficient to determine results. Since an optimum capital structure, or corporate financing mix, will optimize the market share price and value of a business, financing choices apply to major corporate decisions.

Fixed assets, liquidity, taxes, market risk, and the annual inflation rate have all been found to be some of the most important variables in financial institution funding decisions in previous empirical studies (Mwangi & Murigu, 2015). A variety of capital structure metrics have an effect on a company's success and profitability. Previous research has found a positive relationship between shortterm debt, total debt, and efficiency, but that long-term debt has a negative effect on profitability as measured by return on equity (Abor, 2005). In Chinese companies, there was a negative relationship between leverage and efficiency, as

measured by the ratio of earnings before interest and taxes to total assets (Huang, 2006).

There have also been studies, such as Ebaid's (2009), that have found no connection between capital structure and efficiency. Some of the most important capital structure determinants are also used in studies examining the effect of financing decisions on efficiency and profitability. When a business wants to grow, it may use more debt, however it tries to fund fixed assets with internal funds. Profitable firms and those with high liquidities avoided debt in order to reduce losses (Serghiescu & Văidean, 2014).

For a period of five years, Abor (2005) investigated the impact of capital structure on the profitability of companies listed on the Ghana stock exchange. He discovered that short-term debt (SDA) and return on equity (ROE) have a significant positive relationship, indicating that high-earning corporations use short-term debt to fund their operations. In other words, short-term debt, which accounts for 85 percent of overall debt financing in Ghana, is a critical source of funding for the country's businesses. The findings, however, revealed an unfavorable relationship between long-term debt (LDA) and return on investment (ROI). The regression showed that total debt (TDA) and ROE, which tests the relationship between total debt and profitability, have a positive relationship. This suggests that high-earning businesses rely on debt as a primary source of financing.

For the four years from 2006 to 2009, Umar et al. (2012) looked at the effect of capital structure on the financial results of the top 100 companies on the

Karachi Stock Exchange. To show the relationship, the exponential least squares regression is used exponentially. The findings indicate that SDA, LDA, and TDA, the three capital structure variables, have a negative effect on EBIT, ROA, EPS, and net profit margin. Despite the fact that the earnings index of price has a negative relationship with SDA, it has a favorable relationship with LDA and a marginal relationship with TDA. The findings also show that while ROE has no effect on SDA or TDA, it does have a positive impact on LTDTA.

The impact of capital structure on bank efficiency in Palestinian financial institutions was calculated by ROE, ROA, total deposit to assets, total loans to total assets, and loans to deposits by Abbadi and Abu-Rub (2012). The report discovered that while leverage has a negative impact on bank earnings, increasing each ROA and total deposit in assets improves the bank's performance.

The impact of capital structure on the performance of Jordanian banks is investigated by Taani (2013). The annual financial statements of 12 commercial banks listed on the Amman Stock Exchange, spanning a five-year period from 2007 to 2011, were used in Taani's research. The capital structure variables were subjected to several regressions based on performance metrics like net profit, return on investment, return on equity, and net interest margin, as well as total debt to total funds and total debt to total capital. The findings revealed that TDA has a significant and positive relationship with the bank's success.

Between 2008 and 2012, Goyal (2013) investigated the effect of capital structure on the profitability of Indian public sector banks listed on the National Stock Exchange. Relationships between ROE, ROA, and EPS and capital structure

were established using regression analysis. SDA has a positive relationship with profitability as measured by ROE, ROA, and EPS, according to the findings.

Mujahid and Akhtar (2014) found that capital structure has a positive impact on firm financial performance and shareholder wealth in Pakistan's textile sector. For six years, from 2006 to 2011, the study sampled 155 textile companies in Pakistan. Financial performance, as measured by return on assets, return on equity, and earnings per share, served as the dependent variable. The debt-to-equity ratio was used to determine the independent variable, capital structure.

Pouraghajan et al. (2012) examine the relationship between capital structure and financial performance using data from Iranian companies. Returns on assets (ROA) and returns on equity (ROE) are used as proxies for financial performance, while debt ratio and other measures are used to account for capital structure. The author discovers evidence that lowering debt ratios can help companies perform better. Capital structure is important for a company's financial performance, as it was discovered in China; leverage is negatively correlated with asset returns.

# Capital structure and organisational growth

Organizational growth is a deciding factor in capital structure analysis, **NOBIS** according to research. In general, researchers consider growth as a determinant from two angles: past growth and growth opportunities (Vigrén, 2009; Acedo-Ramirez, Ayala-Calvo, & Navarrete-Martinez, 2017). Development is thought to be positively linked to debt (Acedo-Ramirez et al.) because businesses with rapid growth appear to drain internal funds quickly, forcing them to issue more debt (Bonelle et al., 2015). According to some analysts, high-growth SMEs run the risk

of diluting ownership and limiting their financing options (Acedo-Ramirez et al.). Furthermore, it has been discovered that financiers, especially banks, are more likely to form fruitful relationships with small and medium-sized businesses with high growth potential. Banks and other lending institutions, according to Huyghebaert, Van de Gucht, and Van Hulle (2007), are more willing to provide debt capital to high-growth SMEs.

While there are numerous explanatory characteristics of growth as a determinant of leverage, it is known that organizational growth increases the use of short-term debt more than long-term debt (Cassar & Holmes, 2003). According to Saeedi and Mahmoodi (2011), high growth rates among SMEs indicate higher leverage, which is due to firms' need for external funds and bank lending preferences. On the other hand, Zeitun and Gang Tian (2007) discovered that young, high-growth firms have higher levels of long-term debt, and that growth rates seem to only affect the leverage of SMEs that have depleted internal funds and must rely on debt to finance operations.

Nonetheless, the empirical evidence on the direction of the association between SMEs' growth and debt-equity ratio appears to be mixed and inconclusive. Cassar and Holmes (2003) found a positive but negligible link between debt financing and SMEs' growth, while Huyghebaert et al. (2007) discovered a positive and important link between debt financing and firm growth. The relationship seems to vary based on the size of the company. The results of Acedo-Ramirez et al. (2017) indicate a positive relationship between growth and debt in high-growth medium-sized businesses, but a negative relationship in small businesses. Moritz,

Block, and Heinz (2016) discovered a promising relationship between the two, but they cautioned that the results could be distorted by different levels of profitability and innovation activity.

It is common knowledge that high-growth SMEs may be forced to rely on external funds to fund operations, and financiers may be enticed to provide debt capital to such businesses in the hopes of establishing long-term relationships. It is worth noting, however, that different levels of growth will result in different levels of indebtedness. As a result, generalizations about the relationship between growth and leverage are difficult to create, since empirical research seldom finds a significant relationship between growth and leverage in either direction.

### Capital structure and market value of firms

Since Modigliani and Miller (1958) proposed the irrelevance proposition under the restrictive premise that capital structure has no impact on firm value, capital structure has been the subject of extensive research. A variety of studies have shown that financial leverage has a direct impact on a company's valuation. There is no strong dimension of interaction between leverage and firm value, according to the researchers, who found mixed results. Some studies have found a favorable relationship between leverage and firm value, while others have found an opposite relationship. According to Jermias (2008), debt funding provides a tax shelter for the company while also ensuring increased productivity due to lenderimposed restrictive covenants. Phillips and Sipahioglu (2004) and Bhatti and Qureshi (2007), on the other hand, discovered an inverse relationship between debt and firm value.

Tobin's Q, an accounting-based indicator of firm value, is used to determine the value of a firm as a dependent variable. According to the literature, Tobin's Q best represents the firm's value because it describes a range of corporate dimensions such as differences in diversification and investment decisions among companies, the relationship of corporate managers' equity ownership with firm value and payout, and funding and compensation policies (Wolfe & Sauaia, 2014). Tobin's Q is often used to determine how investors value a business.

Many studies have looked at the relationship between a firm's leverage and its success, but the results are mixed. Bagram and Khan (2012), for example, looked at the relationship between capital structure decisions and firm results in Pakistani engineering firms listed on the Stock Exchange. Financial leverage had a strong inverse relationship with firm output as measured by Return on Assets, Gross Profit Margin, and Tobin's Q, according to the findings. Also worth mentioning is Cheng and Tzeng's (2011) analysis, which found that firms with higher leverage had higher values than firms with lower leverage, but this was based on the nature of the firm's finances.

# **Financial Performance among financial institutions**

It is a general expectation that investors seek indications of wealthier positions as a result of their investment (Baharuddin et al., 2011). Typically, financial institutions like the banks categorize financial performance measures/indicators on the basis of liquidity/solvency, profitability, repayment capacity, and financial efficiency (Baharuddin et al.). The analysis of financial performance therefore concerns the selection, evaluation, and interpretation of

financial data to inform investment and financial management decision-making. The analysis process, in the description of Baharuddin et al. and Pouraghajan et al. (2012), helped the identification of financial strengths and weaknesses and the short and long-term forecast of business growth.

Pouraghajan et al. (2012) noted that relevant data for the purposes of financial performance evaluations are usually sourced from formal financial statements. Widely used financial information or statements include income statement, cash flow, balance sheet, and movement of equity prepared by the accountant at the end of an accounting year, based on recorded facts in monetary terms.

### **Conceptual Framework**

The review of concepts in the study points out clearly that capital for financial institutions either comes from equity sources or debt financing or both, but research reviewed so far establishes the use of both debt and equity financing on their capital structure. The debt capital of financial institutions may also be longterm with a repayment period more than one year or short-term debt with repayment period within one year. Such sources of debt financing include loans, debenture, leasing, and other financial securities. The equity finance component of the capital structure represents funding from the owners (shareholders) of the organization in the form of retained earnings and issue of ordinary and preference shares.

Empirical evidence (Mwangi & Murigu, 2015; Akintoye, 2008; Pouraghajan et al., 2012) showed some relationship between capital structure (debt or equity) and financial performance of financial institutions, for which the

relationship could be positive or negative. Financial performance indicators are many but the current study selects return on assets (ROA), return on equity (ROE) and earnings per share (EPS) as dependent variables for test of relationship they have with financial institutions' capital structure (debt and equity financing), as conceptualised on Figure 1.





Source: Field Survey (2020)

From the figure, capital structure is captured by debt financing and equity financing while the performance indicator is captured by Return on Asset (ROA), Return on Equity (ROE) and Earning Per Share (EPS). The performance indicators are the dependent variables and the capital structure variables are the independent variables. In essence, the current study assesses the relationship between capital structure and its significant impact on financial performance among selected financial institutions operating in Sekondi Takoradi Metropolis in Ghana.

### **Chapter Summary**

This chapter examined the research's theoretical basis. The study's idea was described by other researchers. The findings of other researchers' empirical reviews were also analysed.

### **CHAPTER THREE**

# **RESEARCH METHODS**

# Introduction

The chapter discusses the methods employed for this research. The methodology consists of the design of the research, approach of the research, study population, research sample size, sampling technique, procedure for collecting data, and the statistical analysis employed for the research.

# **Research Approach**

Quantitative research approach was deemed appropriate given the objectives of the current study where the effect of capital structure (debt-equity ratio) was examined on return on assets (profitability), return on equity (profitability), and earnings per share (growth). This is particularly true given that the study's variables, namely equity, and long-term debt, are all quantitative financial indices.

### **Research Design**

The research is based on panel data, which is the pooling of cross-sectional findings from many firms over several years. The ability of panel design to yield more robust estimates than cross sectional or time series estimation techniques alone is one of its strengths (Akintoye, 2008). Secondary data was derived from published financial statements on the websites of the selected institutions, including statements of financial status (balance sheet), detailed income statement, and management reports. Since this study is observational, it adheres to the positivism

model. Positivists assume that fact is consistent and that it can be observed and described objectively without affecting the phenomenon under investigation (Awunyo-Vitor & Badu, 2012). They argued that events should be isolated and findings should be able to be replicated.

The two key approaches to conducting research are quantitative and qualitative (Yates, 2004), and a hybrid approach, known as the mixed approach, is equally effective in reaping the benefits of both paradigms. The quantitative approach works by formulating testable hypotheses and ideas that can be generalized. The quantitative method is a scientific, fast, and simple alternative that allows for statistical data analysis, generalization of results, drawing logical conclusions based on numerical values, and study comparability (Amaratunga et al., 2002). Criticism, on the other hand, is based on its rigidity, artificiality, and ineffectiveness in predicting human behavior. The qualitative method improves rigor and comprehension of complex phenomena while allowing researchers to keep a tight grip on the nature and speed of their study (Yates, 2004). However, since it relies on small samples, it is time consuming and costly, and the results are not generalizable.

# **Population**

# NOB15

The target population in this research work comprised all the licensed and authorized financial institutions (specifically banks and insurance companies certified by the Ministry of Finance) operating in Sekondi Takoradi Metropolis.

### **Sampling Procedure**

A sample usually refers to a section of the population that the investigator uses to establish references from sample to population as a representative unit of the whole population cosmos (Abbadi & Abu-Rub, 2012). It was decided to utilize the convenient sampling approach to pick the study's sample. Convenience samples are also known as judgemental sampling. This sampling technique is selected based on the extent to which the units in the target population satisfy the requirements for easy access to the needed data. The basic criterion for using this sampling approach is because of data availability. Therefore, Financial Institutions have been chosen and utilized as reporting institutions that have published financial statements on their websites for the reporting period 2014-2018 and have all financial performance metrics. This is critical since the source of data was the institution's website. Hence, those institutions that do not have the complect information on their site do not form part of the study sample. The sample size included eleven financial institutions, five commercial banks and six insurance firms.

# **Data Collection Instrument**

The information of interest used to compute the various variables was electronically sourced from the audited statements of financial position and comprehensive income as published by the various institutions on their respective company websites. Data was recorded in the data observation sheet (Appendix A) developed by the researcher, for a period spanning five recent years.

Since the study relied on audited financial statements which were prepared in accordance with the international accounting standards, high level of reliability and validity were anticipated. Reliability analysis involves finding out the extent to which measurement of a particular test is repeatable whereas validity also explains the accuracy of measurements (Titman, 1984). Data was therefore need not be pretested.

### **Data Collection Procedure**

Raw data in the form of quantitative figures extracted from the published audited financial statements onto the observation sheet. To ease computations, raw figures extracted were rounded up to the nearest thousand and computations of ratios were also approximated to two decimal places. Computation for the relevant ratios for example total debt-equity ratio (TDE), return on assets (ROA), return on equity (ROE) and earnings per share (EPS) were done accordingly and recorded in the data computation sheet (Appendix B).

# **Organization and measurement of variables**

Variables	Type of	Operationalization	Measurement	Hypothesized
	Variable			direction
Capital	Independent	Ratio of total long term	Total debt	Influences the
structure		and short-term debt to	/Total equity	dependent
Debt equity		total equity.	capital	variables.
ratio				
ROA	Dependent	Ratio of net operating	Net Income	Has a
		profit to the firms' total	/Assets	relationship
		assets recorded in the		with capital
		statement of financial		structure.
		position		

Table 1	l:0	perationali	sation &	<b>Measurem</b>	ent of V	ariables

EPS	Dependent	The portion of profit	Total	Has a
		allocated to each	Earnings/No. of	relationship
		outstanding share.	ordinary shares.	with capital
				structure.
ROE	Dependent	Ratio of net operating	Net Income	Has a
		profit to the equity capital	/Equity capital	relationship
		recorded in the financial		with capital
		position		structure

Source: Field Survey (2020)

The calculation of performance can be very subjective when it comes to determining the relationship between capital structure and the performance of selected financial institutions in this current study because performance metrics and capital structure variables differ. Various research on how capital structure affects efficiency have used various metrics such as Return on Assets (ROA) (Abbadi & Abu-Rub, 2012; Awunyo-Vitor & Badu, 2012; Akeem et al., 2014), Return on Investment (ROI), and Return on Equity (ROE) (Akintoye, 2008). To calculate the efficiency of selected financial institutions, this analysis uses three dependent variables: return on asset (ROA), return on equity (ROE), and earnings per share (EPS).

Despite the fact that there is no single measure of firm success in the literature, ROA, ROE, and EPS were chosen because they are relevant accountingbased and generally recognized performance indicators (Abbadi & Abu-Rub, 2012). ROA may also be thought of as a measure of management's efficiency in using all assets under its control, regardless of funding source.

Akintoye (2008) examined the effect of capital structure option on the results of 64 Egyptian firms from 1997 to 2005. The study used three accounting-

based metrics, including ROA, ROE, and gross profit margin, and found that capital structure decisions had little or no effect on firm results. This decision is based on the premise that various interpretations of these metrics can be made about a company's success.

Long-term debt, "short-term debt, and gross debt to equity are examples of independent variables in the capital structure. In South Africa, studies (Abor, 2007) have discovered a positive relationship between short-term debt and return on assets. According to Abor's research, short-term debt is less expensive than longterm debt. The current research, on the other hand, uses the total debt to equity ratio as an independent capital structure metric in order to focus on the effect of leverage on firm results. Gleason, Mathur, and Mathur (2000) found that total debt was negatively linked to return on assets (ROA), and Cheng (2009) found that debt ratio had major negative effects on operating efficiency.

# **Data Processing and Analysis**

According to Emory and Cooper (2003), raw data obtained from research is useless, unless it is transformed to achieve the research objectives. Data analysis usually involves reducing the raw data into a manageable size, developing summaries and applying statistical inferences. In the current study, data from published financial statements was summarized and relevant ratios derived were fed into an analysis tool called the Statistical Package for Social Sciences (SPSS) version 2.0 for quantitative analysis to aid generalisation of the study findings to the study population. This data analysis software is supported by research (Zikmund, 2003) as appropriate to generate descriptive statistics such as

percentages, mean values and standard deviations. Regression analysis was also run for inferential statistics such as correlations and significant values to aid analysis capable of generalizing results to the research population. The study used 95% confident interval and 5% margin of error and thus accepted significant level at a p-value of 0.05. The variables used in the study were operationalised and measured as shown in Table 1.

# **Chapter** Summary

This chapter explained the specific methods, procedures and techniques used to conduct the study in respect of data collection, handling, presentation and analysis. The study used panel data, mainly from the secondary source and the quantitative paradigm for data analysis and inferences. The quantitative approach however, have limitations of a sort as it does not allow exploration into what reasons might underlie firms' choices of particular capital structure policies. The variables used include capital structure as an independent variable, specifically debt-equity ratio and performance variables ROA, EPS and ROE as dependent variables. The study analysed data with SPSS version 2.0 as the analytical software using descriptive and inferential analysis to determine the relationship between the dependent and independent variables.

### **CHAPTER FOUR**

# **RESULTS AND DISCUSSION**

# Introduction

The result and discussion are dealt with in the chapter. The objectives of the study were analysed under this section. The assumption under the study were tested as well.

### **Test of Multicollinearity between Study Variables**

When two or more predictor variables are strongly correlated, this is known as multicollinearity (Davis et al., 2013). The implementation of linear multiple regression analysis assumes that the predictor variables are not multicollinear (Shou & Smithson, 2015). Individual parameter estimates become difficult to interpret correctly when multicollinearity is too high (Zikmund et al., 2010). A suitable variation inflation factor (VIF) value, according to the multicollinearity assumption, is between 1 and 10. Multicollinearity occurs when one predictor variable has a clear linear relationship with another predictor variable. Table 2 (a), (b), and (c) display the collinearity figures (c).

# NOBIS

Model		Unsta	andardized	Standardized	t-statistics	Sig.	Collinearity Sta	itistics
		Coe	efficients	Coefficients				
		В	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.193	.091		2.125	.063		
	TDE	036	.069	173	526	.612	1.000	1.000
2	(Constant)	.416	.236		1.762	.112		
	TDE	.050	.179	.093	.281	.785	1.000	1.000
3	(Constant)	1.666	.720	X	2.315	.046		
	TDE	286	.545	172	524	.613	1.000	1.000

# Table 2: Collinearity Statistics for Model One, Two and Three

Dependent variable for mode 1, 2 and 3 are ROA, ROE and EPS respectively

Source: Field Survey (2020)

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The VIF values obtained were consistent at 1.00 for ROA, ROE and EPS and falls within the empirically acceptable range (1 and 10) proven by researchers (Buchanan, 2018). The VIF value of 1 obtained on the collinearity statistics is at the least side of the acceptable range indicating that the coefficient is weak and suggests low correlations between the predictor variables.

### Extent of financial gearing of selected financial institutions

Extent of financial gearing which is measured as proportions of debt and equity components of the capital structure of selected financial institutions is presented under this section. The analysis begins with the key features extracted from the financial statements that were used to determine the capital structure (independent variable) and the performance indicators (dependent variables). The collected data was analysed using quantitative data analysis methods to derive descriptive statistics in mean and standard deviations as well as inferential statistics in correlation and significant values. Ratios of capital structure for analysis have been presented in Table 3.

Institution	Α	В	С	D	Е	F	G	Н	Ι	J	K
Codes		7	NC	BIS	5	5					
Capital											
structure	0.23	1.66	0.11	1.30	0.42	0.10	0.25	3.63	0.01	1.03	0.46
(TDE)											

 Table 3: Debt to equity ratios for the financial institutions

Source: Field Survey (2020)

The assessment of financial gearing was made with the capital structure using estimates of debt-to-equity ratios. A debt-to-equity ratio of 1:1 for instance, indicates equal debt and equity capital financing for the organization. In the event

that debt capital outweighs equity capital on the capital structure, the resultant value is more than 1, indicating that the organization is highly geared. On the other hand, a resultant value of debt-to-equity ratio that is less than 1 implies higher equity than debt on the capital structure, which also suggests low gearing.

It is clear from Table 3 that, four institutions; B, D, H and J have gearing ratios more than 1 and suggest that such institutions are highly geared. On the reverse side, the remaining financial institutions have gearing ratios less than 1, which also suggest low gearing. The institutions seem to be advocates of agency theory that support debt financing of public commercial business such as the financial institutions (Pouraghajan et al., 2012). Descriptive statistics for the study variables (both dependent and independent) as presented in Table 4 give further details.

					Std.
Variables	Ν	Minimum Ma	aximum	Mean	Deviation
TDE	11	.01	3.63	.8361	1.07329
ROA	11	.01	.72	.1624	.22414
ROE	11	.04	1.90	.4582	.57803
EPS	11	.11	4.39	1.4273	1.78052
Valid N (listwise)	11				

Table 4: Descriptive Statistics of Study variables

Source: Field Survey (2020)

Table 4 shows the least of total debt to equity ratio (TDE) of 0.01 and a maximum TDE of 3.63. It could be observed from a mean value of 0.8361 (which is less than 1), indicating that most of the financial institutions use more of equity

financing than debt financing on their capital structure. The results imply that on average most financial institutions are lowly geared in consonance with Shubita and Alsawalhah (2012), but at variance with the findings in Muzır (2011).

For the assessment of relationship between capital structure and the performance of financial institutions, an analysis of performance indicators was appropriate. Ratios of performance indicators estimated from the 5-years averages extracted from published audited financial statements of the selected institutions were presented in Table 5.

		Performance	indicators
Instituti	ons ROA (Net	ROE (Net income	EPS e/ (Total Earnings/
	Income/As	sets) Equity capita	l) No. of ordinary shares)
А	0.29	0.38	0.29
В	0.03	0.22	0.21
C	0.08	0.21	0.29
D	0.02	1.90	4.04
Е	0.04	0.27	1.07
F	0.08	0.24	4.39
G	0.01	NOBIS <sup>0.07</sup>	1.08
Н	0.04	0.34	0.45
Ι	0.07	0.12	0.11
J	0.41	0.45	0.42
K	0.72	0.04	0.35

# Table 5: Performance of Financial Institutions

Source: Field Survey (2020)

On return on assets (ROA), none of the institutions could yield net income more than its total assets. Only a single institution (K) could obtain ROA ratio (0.72) to suggest that net income gained over the 5-year period could cover more than half of its total assets. Nonetheless, studies (Bradley, Jarrell & Kim, 1984; Cassar & Holmes, 2003) support that ROAs over 0.05 (5%) are generally considered good. On that premise, almost all the institutions (91%) could be said to have good performance as far as return on assets (ROA) is concerned. Return on equity (ROE) also recorded a minimum of 0.04 (4%) and a maximum of 1.90 (nearly double the total assets). Earnings per share (EPS) as a performance indicator of management efficiency recorded a minimum of 0.11 and a maximum of 4.39.

### Capital Structure and Return on Asset (ROA)

Descriptive statistics in Table 4 gives further highlight that some institutions recorded an average of 1% return on assets whilst others recorded as high as 72% return on assets. On average however, the mean ROA of 0.1624 indicates that most of the institutions could yield an average of 16% return on assets similar to the findings established among banks studied by Mwangi and Murigu (2015). It can be concluded that 8 of the institutions performed above average representing nearly 73% of them.

### **Test of Hypothesis One**

The study assessed the relationship between capital structure (TDE) and return on assets (ROA) as a performance indicator in line with hypothesis 1, which states that *Debt-equity ratio positively and significantly correlates with return on* 

*assets (ROA).* Subsequently, a correlation matrix was run and had the results in Table 6.

Variable	Test	TDE (total debt to total equity)	ROA (Net income to total assets)
TDE total debt to	Pearson Correlation	1	173
total equity	Sig. (2-tailed)		.612
	Ν	11	11
* Completion in size	. : f:	1(0(1-1))	

### **Table 6: Correlation Statistics**

\* Correlation is significant at the 0.05 level (2-tailed).

Source: Field Survey (2020)

The correlation statistics reveal an inverse relationship with a Pearson correlation co-efficient of -0.173. The result stands to suggest that given an increasing rate of debt to equity, mainly resulting from increasing debt capital, the return on assets (ROA) rather decreases and vice versa. This relationship is however not significant giving P=0.612 which is greater than the determinable significant value of p<0.05 at 5% margin of error and 95% confident interval. Therefore, there is enough evidence to conclude that hypothesis 1 be rejected. The result is consistent with the findings in Mwangi and Murigu (2015) and Serghiescu and Văidean (2014).

# **Capital Structure and Return on Equity (ROE)**

Descriptive statistics in Table 4 gives further highlights that some institutions recorded an average of 4% return on equity whilst others recorded as high as 190% return on equity. Research on corporate performance (Vaia et al., 2017) suggests ideal ROEs ranging from 15% to 20%. It can therefore be concluded

that 8 out of the 11 institutions are creditably good representing nearly 73% of them. For their high performance in ROE, the institutions are seen as being mindful of the stewardship theory which maintains that a steward (management) protects and maximizes shareholders' wealth through business performance to reflect the maximization of management's (steward's) utility functions (Munene & Guyo, 2013).

It can generally be expressed that majority of the financial institutions in Sekondi Takoradi Metropolis adequately generate income from the equity capital injected by shareholders into the organization, and in fact renders the organizations attractive to investors (Cohen & Sayag, 2010). This finding is however at variance with Bouaziz and Bouri's (2012) findings in Tunisia for financial institutions.

# **Test of Hypothesis Two**

To help establish any possible relationship between debt-equity ratio (capital structure) and return on equity as a performance indicator, a correlation matrix was run and had the results in Table 7.

Table 7:	Correl	lation	Stati	stics
----------	--------	--------	-------	-------

Variable	Test	TDE (total debt to total	ROE (Net income to Equity
		equity)	capital)
TDE (total debt to total	Pearson Correlation	1	.093
equity)	Sig. (2-tailed)		.785
	Ν	11	11

\* Correlation is significant at the 0.05 level (2-tailed).

Source: Field Survey (2020)

The correlation statistics in Table 7 discloses a positive Pearson correlation of 0.093. This suggests that given an increasing rate of debt-to-equity capital (TDE), resulting from increasing debt capital, return on equity also increases. The implication here is that notwithstanding high interest charges that usually go with debt capital, the financial institutions are able to earn adequate returns on shareholders' equity. The level of significance (0.785) however is not significant given the accepted significant level of P<0.05 in this study. The finding here nearly conformed with Bouaziz and Bouri (2012) who found positive and significant correlation between capital structure and return on equity among insurance companies. As a result, there is adequate evidence to reject hypothesis 2 which states that "debt-equity ratio positively and significantly correlates with return on equity (ROE).

### **Impact of Capital Structure on Earning Per Share (EPS)**

As research holds (Ebaid, 2009), EPS indicates how much money a company makes for each share in its stock and it is used as a metric to measure corporate value. Reference to the descriptive statistics in Table 4 in this study, the institutions recorded EPS ranging from 0.11 to 4.39 with a mean performance of 1.4273. It is observed that only about 18% of the institutions studied performed above average. It is anticipated that increasing growth rates of these firms' EPS will suggest a strong demand for their shares in trade as investors require high returns for their investment (Alrafadi & Md-yusuf, 2014). Prudent corporate capital management is a predictor of corporate earnings therefore; capital structure is said to have some relationship with EPS but to what extent it varies among companies.

# **Test of Hypothesis Three**

To what extent does capital structure (debt-equity ratio) impact on the corporate value (EPS) of the financial institutions was another question for investigation in the current study. In response to that, a correlation matrix was once again run to test correlation between the two variables and any significant impact thereon. The test of correlation produced the statistics in Table 8.

		TDE	EPS	
Variable	Test	(Total debt to total	(Earnings to number	
		equity)	of shares)	
TDE	Pearson	1	172	
(total debt to total	Correlation	-		
equity)	Sig. (2-tailed)		.613	
	Ν	11	11	

#### **Table 8: Correlation Statistics**

\* Correlation is significant at the 0.05 level (2-tailed)

Source: Field Survey (2020)

As indicated in the correlation statistics in Table 8, capital structure negatively correlates with the institutions' earnings per share (EPS) given -0.172 Pearson correlation co-efficient. This seems to suggest that increasing debt to equity ratios (TDEs), resulting from increasing debt financing factor on the companies' capital structure, tends to lessen the earnings of these firms as established in (Akeem et al., 2014). Perhaps, these institutions pay high rates of interest on their debt capital which eats up their earnings (net income). The significant value of 0.613 indicated on the correlation matrix Table 8 is clear evidence to accept the third hypothesis that "there is no significant impact of debt-

*equity ratio on corporate value (EPS) of financial institutions*". The summary of results on hypothesis tested for the study is presented in Table 9.

Туре	Hypotheses	P-value	Conclusion
		obtained	
Alternative	Debt-equity ratio positively and	0.612	Rejected
$(H_1)$	significantly correlates with return on		
	assets (ROA).		
Alternative	debt-equity ratio positively and	0.785	Rejected
$(H_l)$	significantly correlates with return on		
< - <i>i</i>	equity (ROE)		
Null $(H_0)$	there is no significant impact of debt-	0.613	Accepted
	equity ratio on corporate value (EPS)		
	of financial institutions		

**Table 9: Summary of Hypothesis tested** 

\* Correlation is significant at the 0.05 level (2-tailed). a. Listwise N=11

Source: Field Survey (2020)

In summary, the study establishes that all the financial institutions operating in Sekondi Takoradi Metropolis operate with a mix of debt and equity capital but most of them have low gearing issue. The institutions perform well with return on equity (ROE) and return on assets (ROA) as most of them recorded performance within industrial standards. Except for EPS which showed a positive correlation with capital structure, ROA and ROE rather showed inverse relationship with capital structure. It was further observed that capital structure displayed some level of impact on ROA, ROE and EPS but the impacts were not significant.

# **Chapter Summary**

The study sought to examine the relationship between capital structure and overall performance of selected financial institutions in Sekondi Takoradi Metropolis in Ghana. The study used the descriptive design and analysed data quantitatively with the help of Statistical Package for Social Science (SPSS) as analytical software. The study involved selected financial institutions mainly banks and insurance companies. The study sample 11 financial institutions made up of five commercial banks and six insurance companies.

All the institutions are licensed limited liability companies that have operated in Ghana for not less than five years. For the purpose of the study, all the selected institutions have agencies in the study area (Sekondi Takoradi Metropolis). Each of these institutions is capable of floating shares to the public and thus raises equity capital in addition to debt capital to finance the business. However, the extent of their capital gearing percentages varies according to institutional policies and strategies.

#### **CHAPTER FIVE**

# SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

# Introduction

This happens to be the study's final chapter. The summary of the findings, conclusions and policy implications and recommendations are discussed in this chapter. For further study, the chapter also includes suggestions. The study was conducted to examine the capital structure of selected financial institutions and its relationship with the performance of the institutions operating in Sekondi Takoradi Metropolis. Eleven institutions were conveniently selected to extract figures of performance indicators and their business financing (capital structure) from audited financial statements over a period of 5 years (2014-2018). Principally, the study sought to establish the extent of financial gearing of the institutions and to test hypotheses; whether or not capital structure (debt to equity ratio) as an independent variable has positive and significant relationship with performance - ROA, ROE, and EPS (the dependent variables) of the firms.

The quantitative method was adopted, where descriptive statistics were generated for analysis in line with study objectives. Pearson correlation was used and on the correlation matrix, a 5% margin of error was allowed at 95% confident interval. Therefore, correlation was significant at p<0.05.

# **Summary of Findings**

After analysis of panel data extracted, the study established that some of the selected financial institutions (36%) employ more debt financing than equity financing on their capital structure. However, a majority of about 64% employ

equity capital more than debt capital. Debt-equity ratios of the institutions ranged from 0.01 to 3.61 with an average of approximately 0.84. It can generally be said that financial institutions in Sekondi Takoradi Metropolis are lowly geared. Following from the study hypotheses, the following findings were established: Debt-equity ratio positively and significantly correlates with Return on Assets (ROA) of selected institutions' financial performance

Average performance in respect of return on assets (ROA) showed a minimum of 0.01 and a maximum of 0.72 among the financial institutions. It was then established that 73% of these institutions recorded above average industrial performance within the period. Test of correlation between capital structure and ROA also showed an inverse (p=-0.173) and statistically insignificant (p=0.612) relationship between the variables. The first hypothesis as indicated earlier was therefore rejected.

Debt-equity ratio positively and significantly correlates with Return on Equity (ROE) of selected institutions' financial performance

It was found from the study that within the 5-year period the financial institutions recorded a minimum average of 0.04 in ROE and a maximum 1.90 showing a mean performance of about 46%. The correlation matrix run showed a positive correlation co-efficient of 0.093 at p=0.785 significant level. Having shown p<0.05, it can be stated that the study found positive but no significant relationship between capital structure and ROE.

There is no significant impact of Debt-Equity ratio on corporate value (EPS) of selected institutions' financial performance

The study established a minimum of 0.11 and a maximum of 4.39 with a mean performance of approximately 1.44 for earnings per share (EPS). Capital structure (debt to equity ratios) showed inverse relationship of -0.172 with EPS at 0.613 significant level. It is therefore established that the study found negative and statistically insignificant correlation between capital structure and EPS among the financial institutions in Sekondi Takoradi Metropolis within the study period.

### Conclusions

It is concluded from the findings outlined that:

- 1. All the financial institutions studied leverage debt financing on their capital structure, but about a third of them (36%) are highly geared.
- 2. The firms' performance on ROA is appreciable except for a few of them that performed below the empirically accepted standards ranging from 2014-2018. Capital structure (debt to equity ratio) negatively and insignificantly correlated with ROA. This implies that the higher the debt-to-equity ratio the lower the ROA realized by the firms.
- 3. The mean performance in return on equity (ROE) was good and had positive relationship with capital structure, though not statistically significant. Ordinary shareholders receive high returns in dividends from their investment in the firms.
- 4. A few of the firms studied showed high earnings per share (EPS) and the firms' performance in EPS showed a negative relationship with their capital structure. Therefore, as the firms continue to increase debt capital their earnings on each unit of shares will decrease and vice versa. The

relationship between capital structure and EPS is negative and not statistically significant.

5. Overall, the study concluded that capital structure has both positive and negative impact on the performance of financial institutions. Specifically, it could be concluded that capital structure has no statistically significant relationship with firm performance in respect of ROA, ROE and EPS.

### Recommendations

Based on the findings and the conclusions herewith, the following recommendations could be stated:

- 1. The institutions are noted for their leverage on debt capital to strengthen their capital structure. To be highly geared or not is not in itself wrong, but board of directors and management of the institutions must ensure prudent decisions on capital structure that yields the best of positive returns.
- 2. Board of directors and management of the institutions must ensure utilization of capital on assets that contribute significantly to the income or profit generation for the firms. This is to motivate high ROA backed by efficient use of capital on corporate assets.
- 3. Management must continually strive to avoid payment of high cost of capital to help boost up net income from which equity shareholders receive returns on their investment. Management must strategize on minimizing expenditure patterns to step up net income which invariably tends to increase ROE.

- 4. Having observed low EPS among most of the firms, it is recommended for management to be efficient in their operation such as increasing sales volume to heighten business profit. This would generate high EPS which sustains and attracts investors thereby holding corporate value on a high pedestal.
- 5. In the choice of a particular capital structure, board of directors should consider long or short-term financing that can have positive and significant impact on ROA, ROE and EPS as indicators of organizational performance.

# **Suggestion for Further Study**

It is suggested for a future study into the relationship between capital structure and performance (ROE, ROA and EPS as proxies) of financial institutions using some control variables such as age, firm size, and corporate social responsibility.

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## APPENDIX

## A: Data Collection Instrument: Observational record sheet

Institution	Debt	Equity	Net	Total	Proposed
	capital	capital	income	assets	dividend
2014					
2015					
2016					
2017					
2018				-	
Average			5		

## **B: Data Collection Instrument: Summary of Ratios**

	Performance indicators						
Institutions	TDE	ROA	EPS	ROE			
	(Total debt/Total	(Net	(Total	(Net			
	equity capital)	Income	Earnings/	Income/Equity			
		/Assets)	No. of	Capital)			
			ordinary				
			shares)				
1.							
2.							
3.							
4.			5				
5.							
б.	7.0						
7.							
8.		DIS					
9.		DIG					
10.							
11.							