THE EFFECT OF FINANCIAL LEVERAGE ON COMMERCIAL BANKS' PROFITABILITY IN TANZANIA

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A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION OF THE OPEN UNIVERSITY OF TANZANIA

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CERTIFICATION

The undersigned certify that, I have read and hereby recommend for acceptance by the Open University of Tanzania a dissertation entitled; ''The Effect of Financial Leverage on Commercial Banks' Profitability in Tanzania'' in partial fulfilment of the requirement for the award of Master in Business Administration in Finance.

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Dr. Slaus Mwisomba

(Supervisor)

....

Date

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DECLARATION

I Ishuza Witness Edson, declare that this dissertation is my own origin work and that it has not been presented and will not be presented to any other university for a similar or other degree award.

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Signature

……………………………………

Date

DEDICATION

For you have said ''apart from me you can do nothing'' therefore, this work is dedicated to you, God of heavens for your glory.

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ABSTRACT

The purpose of the study was to investigate the relationship between the financial leverage and commercial bank's profitability in Tanzania. It made use of secondary data from audited financial statements of listed commercial banks at Dar es Salaam Stock Exchange (DSE) since 2007 to 2013. Descriptive statistics was used as a tool to determine the bank's profitability and debt statuses while the relationship between dependent variables measured by Return on Average Asset (ROA) and Return on Average Equity (ROE) with independent variable measured by Debt Ratio (DR) was determined by regression analysis. The study found that the commercial banks are firms with large debt averaging 89.9%, 87.7% and 80.2% for CRDB, NMB and DCB plc respectively. Furthermore the profitability measured in terms of ROA for CRDB, NMB and DCB are 3.7%, 5.1% and 3.7% respectively while that which is measured in terms of ROE are 25.4%, 29.6% and 14.5% respectively as mean values. It was also found out that change of debt amount in the capital structure has a negative effect on return on average asset explained by 33% and a non-effect on return on average equity.

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LIST OF ABBREVIATIONS

CRDB	Commercial Rural Development Bank
DCB	Dar es Salaam Community Bank
DR	Debt ratio
H_0	Null hypothesis
H_1	Alternative hypothesis
LTDTA	Long Term Debt to Total Assets
NFO	Net Financial Obligation
NMB	National Microfinance Bank
OLS	Ordinary Least Squares
PM	Profit Margin
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
STDTA	Short-Term Debt to Total Assets
TDE	Total Debt to Equity
WACC	Weighted Average cost of Capital

CHAPTER ONE

1.0 INTRODUCTION

1.1   Introduction and Background of the Problem

This chapter introduces the intent of the study. It gives the origin of the study in regarding with the existing problem under examination. The problem is all about three contradictory opinions regarding corporate financing. These opinions are that (a) debt financing has positive effect on company's profitability (b) debt financing has negative effect on company's profitability and the (c) debt financing has no effect on company's profitability.

The objectives and hypothesises which were to be answered by this study had been set being the drivers of the study. The chapter also clarify the importance of the results obtained from the study to specific people and organs.

1.2   Background

Wealth creation is a central message of conducting a business (Myers, 2003). A business is defined by online business dictionary as an organization or economic system where goods and services are exchanged for one another or for money. Concise oxford dictionary defines business as a commercial organization. Wealth creation is made by business through organizing what it requires to make business (manpower, materials and machines) in order to generate high future cash flow compared to today's investment.   Business can be conceptualized as shown below:
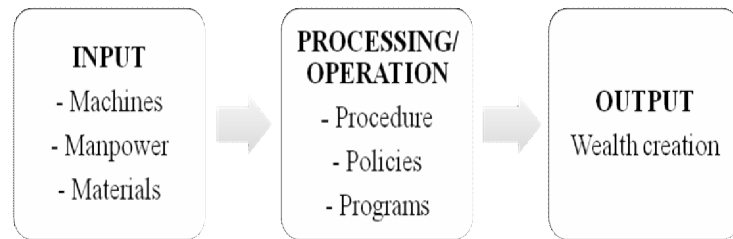
Figure 1.1: Business Conceptual Model

Source: Author's compilation

The input, processing/operation and output unit as a whole make what is called business. The success of business depends on a manner these units are managed. Before the business to commence, business inputs and processing/operation must be planned in advance and this planning results what we call the business plan which is a document that explains how the business will be conducted.

The most important planning is all about procuring necessary resources like machine, materials, technology (procedures) and acquiring manpower. When a business planner plans about these resources it is when the issue of finance rise. The supply of funds at initial and subsequence stages of the business or money used to run business, an activity or a project is termed as financing (Oxford advanced Learner's Dictionary). The business will succeed if a proper supply of fund when it is needed and at a required amount will be properly managed. The idea of starting a business is surrounded by many decisions which determine the success of that particular business. The general decisions are how to finance the business, how to structure the business, how to manage the business and more of such nature. The major decision to the business owner is financing decision since the finance acts as a pillar for

business success which is used to purchase the machines, materials, manpower and working capital.

The business needs finance for purchasing the assets (land, machinery and equipment, building and raw materials), pay bills, pay wages and expanding its operations. Financing decision draws attention where finance needed to perform the mentioned above uses of fund comes from and aiming at exploring the benefits and demerits of each source to the success of the business. Gitman (2009) points out that; financing decision determines both the mix and type of financing used by the firm and firms finance investment activities using either equity or leveraged funds.

The concise oxford dictionary defines equity as the value of the shares issued by a company while it defines leverage as the use of borrowed capital for an investment expecting the profits made to be greater than the interest payable. The decision of financing using either equity or debt funds is termed as financing policy. The business dictionary terms this policy of choosing equity, leverage or mixing both at a given ratio as capital structure. Capital structure describes the sources of funds by which the firm uses to finance the operations and normally given in percentages. A capital structure with 100% equity signifies that the business is conducted using owner's money and 100% debt means that the business is runs using leveraged funds alone and sometime 50% equity that signifies the mix of leverage and equity at the same amount.

The criteria used by financial managers to choose equity or leverage financing have been a puzzle for many years back. Modigliani and Miller (1958) proposed that

under certain assumptions (tax free and other transactions costs) on business working environment the financing decision affects nothing on firm's profitability i.e. it is irrelevant.

Therefore with Modigliani and Miller (1958) financing decision remains the choice of financial manager implying that a debt prone manager will finance the investment with leverage.

Modigliani and Miller (1958) proposition has been a debate through the world in regarding with business financing. The proposition raised the attention of researchers in conducting research to enquire the truth of this proposition from different industries and economies. Khalaf (2013) conducted research to test the truth of Modigliani and Miller (1958) using 45 manufacturing firms listed on the Amman Stock exchange in Jordan. He employed multiple regression analysis on performance indicators such as Return on Asset (ROA) and Profit Margin (PM) as well as Short-Term Debt to Total Assets (STDTA), Long Term Debt to Total Assets (LTDTA) and Total Debt to Equity (TDE) as capital structure variables. The study concluded that statistically, financing decisions is not a major determinant of firm performance. This study concurred with Modigliani & Miller (1958). Akhtar, Javed, Maryam, and Sadia (2012) studied the fuel and energy sector in Pakistan and found that capital structure has an impact on firm's profitability.

They argued that high debt level is associated with high profit. The company in regarding to this research must struggle to acquire the debt as high as possible so as

to get high profit from it. Osuji and Odita (2012) conducted researches in Nigeria looking on the impact of financial leverage represented by debt ratio on the financial performance. They collected data on thirty non-financial firms listed on Nigerian stock exchange and analysed them using panel data. They found that Debt Ratio has significance negative impact on the Profitability Ratios (ROI and ROE).

Taiwa (2012) and Malekian and Pouraghajan (2012) however found a positive relationship between the financial leverage and profitability of firms. These findings post financing decision at cross-road. A cross-road comes from three opposing opinions which are; (a) debt financing has no effect on company's profitability (b) debt financing has positive effect on company's profitability and (c) debt financing has a negative effect on company's profitability. These results call for more researches to be conducted from different nations and sectors using different methodology to reach at a single conclusion on the relationship between the firm's capital structure and profitability specifically on the issue of financial leverage in the capital structure.

It is possible that the three contrary opinions are valid in a particular economy, sector and firm. If this is true then researches are supposed to be done at each level whether at economical level, sector level or at firm level. With the results from these entire levels one can be confident to decide which direction to pursue. Having those contradictory opinions at hand a younger inexperienced financial manager in Tanzania can be baffled in which direction to pursue in designing capital structure as a strategy for running the firm to make profit.

1.3   Statement of the Problem

In regarding with the findings of researchers on financing decision made by financial managers in financing investment opportunities, no single best way to follow on what type of financing that when pursued results in increase of profitability of the firms. Researchers like Zeituni and Tain (2007), Majumdar and Chhibber (1997), Ghosh (2007), Weill (2008) and Arbiyan and Safari (2009) argue that financial leverage has negative impact on profitability of firms while Abor (2005) and Holz (2002) argue that financial leverage has positive impact of firm's profitability and still others researchers argue that leverage has no effects on firm's profitability.

Myers (2003:830) supports two views mathematically that financial leverage can either increase or reduce the Return on Equity. One may want to know, where do the commercial banks in Tanzania stand? So this research is aiming to investigate the effect of financial leverage and profitability of commercial banks in Tanzania so as to promote profitability through designing the right financing decisions to adopt.

1.4   General Objective

The main objective of this study was to determine the relationship between financial leverage and commercial bank's profitability in Tanzania.

1.5   Specific Objectives

i).   To find out the debt status of commercial banks in Tanzania since 2007 to 2013,

ii).   To assess the profitability status of commercial banks in Tanzania since 2007
          to 2013,

iii).   To find out the effect of debt financing on commercial bank's profitability in
          Tanzania.

1.6   Research hypothesis

In the course of conducting the study the researcher was guided by the following
research hypotheses:

Hypothesis 1

H_0**:** There is a negative relationship between Debt Ratio (DR) and Return on
          Average Equity (ROE),

H_1**:** There is a positive relationship between Debt Ratio (DR) and Return on Average
          Equity (ROE),

Hypothesis 2

H_0**:** There is a negative relationship between Debt Ratio (DR) and Return on
          Average Asset (ROA),

H_1**:** There is a positive relationship between Debt Ratio (DR) and Return on Average
          Asset (ROA).

1.7   Significance of the Study

The results of this research shall be used by manager of commercial banks to decide
appropriate type of financing policy for their investment opportunities so as to make

the reasonable profit. Investors will wish to know which commercial bank in Tanzania is safe and profitable to invest and bank customers will wish to know the status of their banks then to make decision. The government will use the results to plan how to control the commercial banks while results are more beneficial to the employees of the banks for knowing the status and progress of their employers so as to plan for their future.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

Review of literature refers to a comprehensive perusal of publications relating to the subject of the study. The purpose of reviewing is to identify previous researches, papers, reports and articles providing information on the research subject that serves as the justification and foundation of the accomplishment of the research. Review of literature meets the secondary data required by the research. Secondary data comprised of concepts, definitions, past statistics, and research results contained in raw data published and summarized to serve as the foundation and context for the research as pointed out by (Saunders, Lewis, and Thornhill, 2009). This chapter begins by looking at the general concepts financial leverage, followed by the theoretical framework, textual review of the recent literature pertaining to financial as they impact the profitability of commercial banks.

2.2 Conceptual Definition

2.2.1 Commercial Bank

A bank is an organization that provides various financial services, for example keeping or lending money (Oxford Advanced Learner's Dictionary). According to (www. businessdictionary.com) a bank is defined as an establishment authorized by a government to accept deposits, pay interest, clear checks, make loans, act as an intermediary in financial transactions, and provide other financial services to its customers while it defines a commercial bank as a privately owned financial

institution which (1) accepts demand and time deposits, (2) makes loans to individuals and organizations, and (3) provides services such as documentary collections, international banking, trade financing.

The Cambridge Business English Dictionary defines a bank as an organization where people and businesses can keep, invest, or borrow money, exchange currencies, etc. or a building where these services are offered while it defines a commercial bank as a bank with branches in many different places that offers services to people and businesses, for example, keeping money in accounts and lending money. Also the same source defines the business of operating a bank or providing the services of a bank as banking. (www.merriam-webster.com) defines a bank as an establishment for the custody, loan, exchange, or issue of money, for the extension of credit, and for facilitating the transmission of funds. This study considered a commercial bank as defined above but also a bank that is publically owned for the purpose of making profit.

The definitions point out that a commercial bank is doing a business of finances. It does it by collecting deposits in one side and makes the loans using the collected finance in another side to the lenders. These are two main activities of a commercial bank which are can be conceptualized as shown below:

D_n → Commercial → L_n

Figure 2.1: Commercial Bank Conceptual Framework

Source: Author compilation

Where

D = is deposits

L = is loans

n =   is 1,2,3,4......., representing customers either depositors or lenders

Total deposits (D_T) is expressed as

$$D_T = D_1 + D_2 + \text{....... ... ...} + D_n$$

Total loan (L_T) is expressed as

$$L_T = L_1 + L_2 + \cdots + L_n$$

For efficient banking sector the total loan (L_T) demanded by the lenders is equal to the amount of total deposits (D_T). This point is called market equilibrium of the banking sector. At equilibrium point the profit (spread) is zero since the lending rate and deposit rate are very close as explained in the illustration below for Market and Bank Equilibriums and Efficient Bank Intermediation which is assuming two intermediation services that are mobilizing deposit and lending.
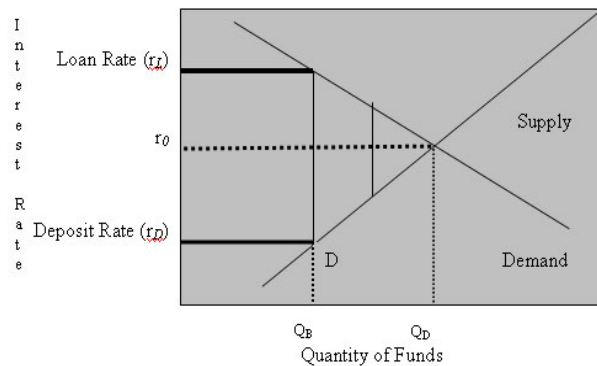
Figure 2.2: Market and Bank Equilibriums and Efficient Bank Intermediation

Source: Adopted from Empirical Studies

If there is no costs of operating the bank, the market equilibrium point is E_o, at which the equilibrium interest rate, r_o, represent both deposit and loan/lending rates. i.e. Deposit rate (r_D) = Lending rate (r_L) also the Demand (D) and Supply (S) of loanable funds are equal. But in reality the costs for operating a bank are there, which makes the lending rate to be high compared with the deposit rate. The commercial bank obtains the profit by giving the depositors low interest rate and demanding higher interest rate from the borrowers called the spread. Mathematically is expressed as:-

$$\text{Spread} = r_L - r_D$$

Where

r_L = is the interest rate the bank charges the lender,

r_D = is the interest rate the bank gives to the depositors or at which it borrows

money in case of borrowing,

For a well-regulated banking sector the spread is very small and the bank profitability then depends on economies of scale through mobilizing much deposits. Intuitively it can be conceptualized that high deposits with low lenders will result the commercial bank into lost while low deposits with high lenders will results high profit because the interest rate will increase as the law of demand and supply states.

According to (Myers 2003) deposits come from economic agents with surplus funds; which means deposits depends on the economic state of the depositor. Which this concept at booming economy the deposits will be high compared during economic recession. The lending rate depends on anticipated opportunities. With many investment opportunities lending rate will increase whether it is booming or

recession economy. Anticipated opportunities depends on many factors like government policy, technological development, social and cultural issues etc.

The commercial bank get profit offer by charging fee and commissions for offering respective services like safekeeping of valuables, documents and securities, acting as agents for collection of utility bills, providing credit information or references, providing financial guidance and advices (advisory services) e.g. financial planning and counselling, financial management advices for business and personal customers consultancy services, corporate cash management services/schemes and insurance services other income still comes from service charge on customer accounts, loan application fees ,ATM withdrawal charges , VISA and master card fees.

Commercial banks also get profit from commission on letters of credit , fee on issue of bank cards, fee on local transfers and drafts , point of sale fees , fee on international telegraphic transfers, commission on guarantees and indemnities, commission on mobile banking, salary processing fees, bills discounted and penalties charged on customer accounts that are below the minimum required balance, significant cash withdrawal without prior notice and closing bank accounts less than one year old.

2.2.2   The Financial Leverage

Financial leverage is the degree to which net operating assets are financed by borrowing with Net Financial Obligation (NFO) (Stephen, 2010:364). Oxford advanced learner's dictionary defines financial leverage as the relationship between

the amount of money that a company owes and the value of its shares. While Gitman (2009) defines financial leverage as the magnification of risk and return introduced through the use of fixed-cost financing, such as debt and preferred stock. Also financial leverage is defined by (Cambridge dictionary) as the relationship between the amount of money that a company or organization owes and the value of the company or organization. The degree is measured by taking a ratio of the debt to assets called debt ratio.

For the purpose of this study the word financial leverage meant the degree in which the commercial banks are financed by debt expressed in terms of deposits of all types, borrowing, income tax payables and other liabilities.

2.2.3   Profitability

(Roger 1998) defines profitability as the ability to generate income also is defined by (Gitman, 2009) as the effectiveness of management in generating profits with its available assets. Also Cambridge dictionary defines profitability as the situation in which a company, product, etc. is producing a profit. For this study the word profitability meant the same meaning that is the ability of commercial banks to generate profit.

2.3   Critical Theoretical Review

This part covers all the relevant theories regarding financing decision of business firm in this study being commercial banks. The theories are examined and analyzed in deep so as to widen our understanding about the problem under study. These

theories are Modigliani and Miller theory I, Modigliani and Miller theory II, Packing order theory, Trade-off theory and Agency cost theory.

2.3.1 The Modigliani and Miller Theory I

This was the first theorem which captured the attention of researchers. It was postulated by Modigliani and Miller (1958) in their seminar presentation and sometimes is called leverage irrelevant theorem.

With this theorem the nature of financing does not affect the profitability of the firm. So managers can decide to use debt or equity financing but under ideal financial environment that excludes transaction costs, tax payment and inflation costs.

This theory was criticized for lack of credibility since no business can operate in an ideal environment assumed by (Modigliani & Miller, 1958).

2.3.2 The Modigliani and Miller Theory II

Modigliani and Miller (1963) proposed a new version in order to respond to the criticism after postulating the irrelevance theory. Under this theorem still they argued that financial leverage is irrelevant with financial performance and if tax and other costs occur, then two factors which are Weighted Average cost of Capital (WACC) and firms cost of equity are to be taken into considerations. The weighted average cost of capital decreases as the debt decreases and firm shareholders demand high cost of equity when the debt increase due to the possible firm's bankruptcy from higher debt (Modigliani & Miller 1963).

2.3.3 Pecking Order Theory

This theory was postulated by Myers and Majluf (1984) and is concerning with how the firm management decide to finance the firm's operations. It states that firms prefer internal (retained earnings) finance to external finance; when external finance is required firm prefer debt before equity. For simplicity the hypothesis states that when a firm's internal cash flows are not enough for financing real investment and paying dividend commitments, the firm issues debt. Further the firm is not planning to issue equity, only in exceptional that costs of financial distress are high rising from issuing debt. The deficit in this case can be expressed as

$$\mathbf{DEF_t = DIV_t + X_t + \Delta W_t + R_t - C_t}\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\mathbf{i}$$

Where

$\mathbf{DEF_t}$ = Deficit

$\mathbf{C_t}$ = Operating cash flows, after interest and taxes,

$\mathbf{DIV}$ = Dividend payments,

$\mathbf{X_t}$ = Capital expenditures,

$\mathbf{\Delta W_t}$ = Net increase in working capital,

$\mathbf{R_t}$ = Current portion of long-term debt at start of period,

With all stock variables measured at the end of period t.

Furthermore as a theory its hypothesis that can be tested to get its validity is stated as follows below in the form of regression model:

$$\mathbf{\Delta D_{it} = a + b_{PO} DEF_{it} + e_{it}}\ldots\ldots\ldots\ldots\ldots\ldots\ldots\mathbf{ii}$$

Where

$\mathbf{\Delta D_{it}}$ = is the amount of debt issued or retire by firm i in year 't'

$\mathbf{DEF_{it}}$ = Deficit for firm i in year 't' but negative

$\mathbf{b_{PO}}$ = The pecking order coefficient

$\mathbf{a}$ = constant

Looking at the two equations the theory is trying to emphasis the condition for issuing the debt. The expression for deficit (DEF_t) in the first equation does not involve the balance sheet which means it can't be the accounting equation therefore the deficit is free from equity fund.

The message conveyed here is that when the internal generated by termed as 'C_t' is larger there won't be deficit except the surplus for which will be used to finance the operations of the firm. But if the internal generated fund is insufficient the deficit will occur hence the firm will think financing the operation through issuing debt. With this concept under normal condition equity is the last resort to be considered but under free financial distress.

For the firm with higher financial distress the only option is to issue equity, of course if the surplus will persist the firm would become a net lender (Sunder, Stewart, & Myers, 1999).

It is not true that the balance sheet if irrelevant because in reality we expect the firm repurchase the stock when there is surplus and also to equity the equity when the surplus is not there. So equations above are not correct. They could be correct if they could incorporate the elements from the balance, however the equations are good

description of financing over a wide range of moderate debt ratios. Without undervaluing the debt benefit, debt financing has the following advantages:- Lenders require a lower rate of return than ordinary shareholders. Debt financial securities present a lower risk than shares for the finance providers because they have prior claims on annual income and liquidation.

In addition, security is often provided and covenants imposed. Also a profitable business effectively pays less for debt capital than equity for another reason: the debt interest can be offset against pre-tax profits before the calculation of the corporation tax bill, thus reducing the tax paid. Mostly issuing and transaction costs associated with raising and servicing debt are generally less than for ordinary shares. With respect to this theory financial leverage has positive implication if the external financing is considered and it is when the internal fund is not available.

2.3.4   The Trade-off Theory

The theory state that Debt offers tax shield, and firms therefore pursue high levels of debt in order to gain the maximum tax benefit ultimately enhance profitability. However, high levels of leverage increases the possibility of bankruptcy because the firm will have the big burden of paying the obligations when they fall due. It was stated by (Myers, 2001). The theory implies that there must be an optimal debt where debt benefit is gained but beyond this amount the firm's risk to meet operations obligations becomes high.

So debt financing is good but when optimized. In reality the optimal level is not stable since bad circumstance normally occurs in the firm's environment as a result

the managers will struggle to adjust the level up to the optimal and it is a cyclic process. The target adjustment level in a simple form states that the changes in debt ratio are explained by the deviation of current debt ratio from the target. This model is expressed as a linear regression equation which takes a form of:

$$\Delta D_{it} = a + b_{TA}(D_{it}^* - D_{it-1}) + e_{it}$$

Where

ΔD_{it} = Adjustment debt ratio for firm i at time t,

D_{it}^* = Target debt ratio for firm i at time t,

D_{it-1} = Current debt ratio,

b_{TA} = Target adjustment coefficient,

At debt ratio of D_{it}^* the gain due to tax shield is maximum but beyond that the loss due to financial distress occurs. The hypothesis to be tested is $b_{TA} > 0$ indicating the adjustment is towards the target, but also $b_{TA} < 1$ which implying positive adjustment costs. The task for managers is to calculate the target debt ratio or optimal level by using historical data then using it as the benchmark for judging the level of debt. The problem with this model is that each firm will have its own optimal level of debt since the amount of tax shield differ from one firm to another.

2.3.5 Agency Cost Theory

The theory which was started by Myers (2001) highlights the conflict of interest arising in the firm's management in trying to pursue its interest rather than the interest of its boss (shareholders). It says ''capital structure is influenced by firm's

management, which has a long term impact on firm's capital structure. However, management might be tempted to pursue person incentives instead of shareholders value. It is argued that this conflict can be mitigated by the firm to finance its activities by issuing debt. In respect to this theory the higher the debt of the firm the higher the profit of the firm due to the fact that management will pursue the interest of the shareholders value and vice versa is true. These theories can be summarized as follows below in the table.

Table 2.1: Summary of Theoretical Propositions

	Theory	The effect of increase in debt
1.	Modigliani and Miller I and II	Debt has no effect under the assumed conditions
2.	Pecking order	Debt has positive effect on profitability
3.	Trade -off	Debt has negative effect on profitability if not optimized
4.	Agency cost	Debt has positive effect on profitability

Source: My compilation

In regard with these theories there is a possible relationship existing between financial leverage and profitability of firms while less considering the Modigliani and Miller theory I and Modigliani and Miller theory II since it is true that each business face tax, inflation and transaction costs and what remains is to find out which relationship.

2.4   Empirical Review

This section examined the studies conducted to investigate the impact of debt on profitability of financial firms and non-financial firm. Therefore only relevant studies were examined. Methodology, year of study and the outcome of it were outlined to see their harmonization with the theories explained above. Comparison between the

outcome of these studies and the claim of the theories was established in order to see their implication.

2.4.1 Empirical Studies Specifically for Banking Sector

A study conducted in Sri Lank by Niresh and Velnampy (2012) found that 89% of total assets in the banking sector represented by debt. This study made use of quantitative data from banks between 2002 and 2009, and analyzed them by using descriptive statistics and correlation analysis to find out the association between financial leverage measured by Debt/Equity and Debt to Total Funds (DTF) and profitability measured by Net profit Ratio, Return on Capital Employed, Return on Equity and Net Interest Margin. Data were presented as argued by (Park 2009:3) and tested at 5% level of significance. Negative association was seen which implies that in Sri Lank debt financing in banking industry results into poor profits.

Ammar, Mohammad, and Muhammad (2013) found a positive relationship between debt financing and bank's profitability. They used multiple regression models to estimate the relationship between capital structure and banking performance. The study was conducted in Pakistan using data from banks listed in stock exchange since 2007 to 2011. To Pakistan high level of debt is associated with high profitability of the banking industry. A research conducted by Yegon1 (2014) in Kenya has shown non -significant relationship between return on average total assets (ROA) and return on average total equity (ROE) with total debt to total assets (DR). They used panel data analysis on the data obtained from Nairobi stock exchange since 2004 to 2012 with the research titled 'The Effects of Capital Structure on

Firm's Profitability: Evidence from Kenya's Banking Sector'. This research concur the preposition of Modigliani and Miller (1958, 1963).

Dadson and Jamil (2012) conducted research in Ghana and found that increase in financial leverage results in decrease of profitability (ROA and ROE) of listed bank. This means that an increase in debt results decrease in profitability of banks. In their study, they collected data from 2000 to 2010 of all listed banks on Ghana stock exchange and analysed them using panel regression methodology. The outcome of these empirical studies can be summarized below as follows in order to generalize the results:

Table 2.2: Summary of Bank Sector Empirical Studies

Author	Country where the study was conducted	The effect of debt noted
Velnampy &Niresh (2012)	Sri lank	Negative effects
Ammar, Mohammad, and Muhammad (2013)	Pakistan	Positive effects
Yegonl (2012)	Kenya	No effect
Dadson and Jamil (2012)	Ghana	Negative effect

Source: Author's compilation

The empirical studies still supports the puzzle. The three view also have being resulted as shown in the table that two studies found an negative effect one a positive effect and one has shown non effect between financial leverage and profitability of commercials banks.

2.4.2   Empirical Studies from Other Sectors

Gull, Rasheed, and Saeed, (2012) in their research conducted in Pakistani using Exponential generalized least square regression on firms listed at Karachi stock

exchange regardless of their sector from 2006 to 2009 shown the positive significant relationship between return on average total assets (ROA) and return on average total equity (ROE) with total debt to total assets (DR). Bokhari (2013) studied the non-financial sector from Pakistan using Ordinary Least Square (OLS) method using data obtained from Karachi stock exchange since 2005 to 2011 and found a negative significant relationship between return on average total assets (ROA) and return on average total equity (ROE) with total debt to total assets (DR).

Nor (2012) in their research entitled 'Reviewing Relationship between Capital Structure and Firm's Performance in Malaysia' with multiple regression analysis using data from 2001 to 2010. The result shown that there is a negative relationship between return on average total assets (ROA) and return on average total equity (ROE) with total debt to total assets (DR) and the same results was found by (Maina & Ishmail, 2014) and Goyal (2014) from Kenya and India respectively.

Osuju and Oditha (2012) conducted research in Nigeria. A sample of thirty non-financial firms listed on the Nigerian Stock Exchange was studied using data of seven year from, 2004 – 2010. Panel data for the selected firms were generated and analyzed using ordinary least squares (OLS) as a method of estimation.

The results shows that Debt Ratio has a significantly negative impact on the firm's financial measures (Return on Asset, ROA, and Return on Equity, ROE). The outcome of these empirical studies can be summarized below as follows in order to generalize the results:

Table 2.3: Summary of Others Sectors Empirical Studies

Author and year	Country where the study was conducted	The effect of debt noted
Gull, Rasheed, and Saeed, (2012)	Pakistani	Positive effect
Mohamad (2012)	Malaysia	Negative effect
Bokhari (2013)	Pakistani	Negative effect
Osuju and Oditha (2012)	Nigeria	Negative effect
Maina and Ishmail (2014)	Kenya	Negative effect
Goyal (2014)	India	Negative effect

Source: Author's Compilation

The studies on financial leverage and profitability in sector different from financial firm have shown that a negative relationship is dominating. Only one out of six has shown a positive impact on profitability. With the table above the probability of positive impact is 0.167 while that of negative impact is 0.833; therefore the negative impact has greater chance to occur that that can't be the grantee.

The question to be asked is there any support of the empirical studies to the theories? Answer this question comparison of the results are compared as shown in the table below:

Table 2.4: Comparison of Results of Empirical Studies with Theories

Type of effect	No. of theories supporting	No. of empirical studies
Positive	2	2
Negative	1	7
Non- effect	1	1

Source: Author's compilation

The theories are dominated by positive effect while empirical studies are dominated by negative effect. But there theory and empirical studies show the importance of debt in maximizing profitability as opposed with (Modigliani and Miller, 1958).

Negative relationship dominates from empirical studies perspective; i.e. large degree of financial leverage is association with poor profit which is opposite to the theories.

2.5   Research Gap

From the literature review, most theories tell the existence of the positive relationship between the financial leverage and profitability of the firms but empirical studies have indicated the negative relationship as predominant effect, at times a positive and no relationship were also identified. This study intended to find out in what categories do commercial banks in Tanzania fall by using three commercial banks which are listed in Dar es Salaam stock exchange.

2.6   Conceptual Framework

The study will employ Return on Assets (ROA) and Return On Equity (ROE) as dependent variables which are the measures of profitability.

It has been pointed out in by Myers (2003) that ROA measure the utilization of available assets by the firms while the interest of the owners is assessed by ROE. Financial leverage is measured by the Debt Ratio (DR). This is calculated by taking the amount of debt divide by the asset of the firm. Because most of theories and studies show the relationship between the dependent (ROE and ROA) and the independent variable (DR) the following general linear regression equation will be employed (Douglas et al 2006).

$$Y = a + bX$$

Where

Y - is the dependent variable (predicated value),

a - is the Y intercept

b – is the slope of the line

X – is any value of independent variable

For the purpose of this research this model looked as follows:

$$ROE = a_1 + b_1 DR \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (1)$$

Figure 2.3: Model 1

$$ROA = a_2 + b_2 DR \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (2)$$

Figure 2.4: Model 2

2.7   Theoretical Framework

2.7.1   Debt Ratio

This ratio measures the proportional of debt in the total asset of the firm. The higher ratio signifies that the firm is financed by high debt (Stephen, 2010). It is given as:-

$$DR = \frac{Total\ liability}{Total\ assets} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (3)$$

The balance sheet gives the total liability and assets that is used to calculate Debt Ratio. The high value of DR indicates that the firm is highly leveraged (Myers 2003:368) since the firm has large amount of debt in the total assets used to finance the business and the low value DR shows that the firm's assets are financed by shareholder's money.

2.7.2 Return on Assets (ROA)

This is the common measure of the profitability of operations (Stephen 2010). It measure whether the management has earned a reasonable return with the assets under control and the higher of it the better the profit. In computation the operation income is used since the interest expenses and income taxes are determined by factors other than a manner which assets are used.

$$ROA = \frac{Operating\ income}{Average\ assets} \quad \text{..} (4)$$

The ratio does not consider the financing policy whether it is equity or debt financing just what it looks is how the firm utilize the assets to produce income. Most successful business earn the return on average total asset of 15% or more and at this rate the business can borrow money at the rate of 3% to 8% as interest to the lender (Williams, 2010:646).

2.7.3 Return on Equity (ROE)

ROE is a measure of net income relative to the company's average stockholder's equity throughout the year (Williams, 2010) and the higher the ROE obtained the better the profit to the shareholders. It is expressed as:-

$$ROE - \frac{Net\ income}{Average\ equity} \quad \text{....................................} (5)$$

Traditionally, shareholders have expected to earn an average annual return of 12% or more from equity investments in large and financially strong companies. The ROE of 30% or more is common especially in rapid growing companies with new or highly

successful products (Williams, 2010:647). A company that is earning a net loss provides its stockholders with a negative return on stockholder's equity.

Generally it is possible a firm to have high ROA and at the same time with low ROE or vice versa being due to the way the business is financed since the ROE depends on the amounts of money contributed by the stockholders in the capital structure. If the debt in the capital structure is high, then the ROE is low compared with the firm with almost the same total assets and annual income. In this study ROE, ROA and DR are annual figures obtained from company's operation performance report.

2.8 Summary of the Chapter

The literature review has shown that some empirical studies show a negative relationship while theories propound positive relationship between financial leverage and profitability implying that the rise of debt level in the capital structure results decrease in profitability. The relationship between financial leverage which is measured by Debt Ratio (DR) and profitability measured by ROA, and ROE do exist, however investigations from different economies give different results between the theories and empirical results. Therefore there was a need to find out what is the situation in our country. This study tried to bridge this knowledge gap.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Overview

This chapter gives the way in which the data of this research was collected and analysed. It starts with research strategies, followed by population survey, area where research was conducted, sampling design and procedures, variable and measurement procedures, method of data collection, and ends with data processing and analysis techniques. Briefly it was a map for carrying the research for which the problem existing was going to be solved or research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure (Kothari, 2004).

3.2 Research Design

Research can be grouped into three categories which exploratory, descriptive and explanatory research (Sounders *et al.,* 2009). Research strategy involves the way the research is conducted and these are experimental, survey, case study, ethnography, action research, longitudinal and cross sectional research strategies. This research employed a quantitative research design.

This is the research design which is intended to examine the relationship between variables and in this research the variables were financial leverage and profitability where dependent and independent variables have been identified (Kothari, 2004). Under this study financial leverage was measured by Debt Ratio (DR) and

profitability measured by Return on average assets (ROA) and return on average equity (ROE).

This research was designed in this way because of the nature of data collected which was quantifiable data and the purpose of relating the variables to see their causal relationships.

3.2.1 Study Area

The data under this study were obtained from commercial banks operating in the United Republic of Tanzania and listed in the stock exchange. The listed company is also owned by public through its shares. The process of listing results the circulation of money in the market and corporate which needs money for financing the projects can obtained it easily. The listed company allows local people who are willing and able to own part of the company through purchasing the share from the stock exchange. This makes the profit made by the listed company to be distributed to local people having shares contrary to unlisted company for which the profit made is distributed to few people owning it. For this reason, listed companies are worthy to be studied in order to make them more profitable.

3.2.2 Population of the Study

A population is defined as a group of units with similar characteristics or behaviours or the full set of cases from which a sample is taken (Saunders *et al*., 2009). The study involved the data from published financial statements of commercial banks operating in Tanzania. These banks are National Microfinance Bank Plc, National

Bank of Commerce, CRDB Bank Plc, Barclays Bank Tanzania, Exim Bank , Stanbic Bank Tanzania, Tanzania Postal Bank , Akiba Commercial Bank, Standard Chartered Bank , FBME Bank, KCB Bank Tanzania, Access Bank Tanzania, Diamond Trust Bank Tanzania, Bank of Africa Tanzania, Azania Bank, The Peoples' Bank of Zanzibar, Tanzania Investment Bank , Dar es Salaam Community Bank, Bank M, Twiga Bancorp. Commercial Bank of Africa, NIC Bank Tanzania, International Commercial Bank, Habib African Bank, African Banking Corporation, I&M Bank Tanzania, Citibank Tanzania, Ecobank Tanzania, United Bank for Africa Tanzania, Tanzania Women Bank, Mkombozi Commercial Bank, Mbinga Community Bank, Bank of Baroda Tanzania, Kilimanjaro Co-operative Bank, Mufindi Community Bank, Mwanga Rural Community Bank , Kagera Farmers Co-operative Bank, Uchumi Commercial Bank, Efatha Bank, Bank of India Tanzania, Tandahimba Community Bank and Maendeleo Bank.

The banking sector has been considered because it is believed that banking sector is a highly leveraged sector and according to Marcia M. Cornett and Hassan Tehranian (2004) 'Commercial banks exist because of the various services they provide to sectors of the economy, e.g. information services, liquidity services, transaction cost services, maturity intermediation services, money supply transmission, credit allocation services, and payment services. Failure to provide these services or a breakdown in their efficient provision can be costly to both the ultimate sources (households) and users (firms) of savings, as well as to the overall economy'. With its importance for economic prosperity that is why it was chosen to be the sector of interest in this study.

3.3 Sample and Sampling Techniques

Company's Act No.12 of 2002, Banking and Financial institution Act of 2005 and Tanzania Financial Accounting Standard No. 1 of 2009 all gives regulations to the banks as the company how to disclose their financial information. Mostly the director's reports must be publicized as per regulation given and one of the regulations is that the report must be audited.

A sample of commercial banks that was considered under this study were those disclosing their financial reports publically in their websites and also registered in Dar es Salaam stock exchange from 2007 and 2013 since the first commercial bank got listed in 2007.

According to (Kothari, 2004) sampling is defined as 'the selection of some part of an aggregate or totality on the basis of which a judgment or inference about the aggregate or totality is made. In other words, it is the process of obtaining information about an entire population by examining only a part of it'. Therefore the sample consisted; Commercial Rural Development Bank (CRDB), National Microfinance Bank (NMB), and Dar es Salaam Community Bank (DCB) except Maendeleo Bank which got listed in 2013.

3.4 Variables and Measurement Procedures

3.4.1 Dependent Variable

The dependent variable is a variable which is affected by other factors. In this research the dependent variable of commercial banks was considered to be

profitability. The data used to calculate the measures of profitability are obtained from income statement of the commercial banks under the study. The research used two profitability measures which are return on average equity (ROE) which focus on shareholder's funds and return on average assets (ROA) which focus on company's performance (Brealey *et al* ., 2001). The ROE and ROA have been calculated using formulae listed in the theoretical framework part.

3.4.2   Independent Variable

The independent variables are variable which affect the dependent variable. This study used financial leverage as an independent variable. Financial leverage is commonly measured by Debt Ratio (DR) as already explained in literature review section. The balance sheets of commercial banks were used to give us the amount of debt owed by commercial banks and the equity amount of that particular commercial bank since 2007 to 2013. The Debt Ratio was calculated using the formulae stated in theoretical framework.

3.4.3   Variable Measurement

During data collection from the commercial banks' financial statement, operating income, net income, total assets, total equity and total liability were taken for each particular year. These data were used in the formula in the table below to obtain the dependent and independent measures.

3.5   Data Collection Method

The study made use of secondary data collected from audited financial reports. These audited financial reports were downloaded from the commercial bank's database

present from bank's website. The commercial bank's websites addresses obtained by following the links given in the Dar es Salaam stock exchange's website. The data from audited financial reports were organized using questionnaires attached.

3.6   Data Processing and Analysis

3.6.1   Data Presentation

Data were presented in the questionnaire given in the appendix. This presentation allowed the task of processing data properly. Using the formula presented in the theoretical framework above DR, ROA and ROE as measures of financial leverage and profitability were calculated.

3.6.2   Data Processing

The data collected were processed using SPSS software after being organized in the required format. Calculations were carried out in the program to produce the return on average total assets (ROA), return on average equity (ROE) and debt ratio using the theoretical formula explained above using equations (3), (4) and (5).

3.6.3   Data Analysis and Interpretation

Descriptive statistic method was used to determine minimum, maximum, mean and standard deviation of ROA, ROE and DR. These were calculated in order to provide a broader overview of trends on commercial banks profitability and debt status from 2007 to 2013 which included charts from each commercial bank.

The linear regression analysis was used to find the relationship between financial leverage measures and profitability measures where the values of 'a' (Y intercept)

and 'b' (slope) parameters of the models were generated then inserted in the models figure 2.2 and figure 2.3 where the relationship between variables existed. These models were used to study the effect between the independent and dependent variables so as to able to predict the value of dependent variable given the value of independent variable Douglas, Samuel, and William (2006). These data analysis method was chosen because they describe and compare variables numerically (Saunders *et al* 2009). The desired level of confidence is 0.05%, because this is a quality based research which its results are intended to be used by the policy makers and managers in their decision making (Douglas *at el*., 2006).

The SPSS program generated the analysis results which were based on the direction, quality and significance of relationship. The t-value shows the quality while sig-value shows significance of the relationship.

The generated values of b (slope) determined the relationship between the independent (DR) and dependent variables (ROA and ROE). A negative significant value of b signified the negative relationship between DR and ROE and ROA; positive significant value of b signified the positive relationship while a non significant value signified non-relationship between independent and dependent variables (Douglas *at el.*, 2006).

That is,

- Significant value of b = negative relationship

- Significant value of b = positive relationship

- No significant value of b = no relationship

CHAPTER FOUR

4.0   RESULTS

4.1   Overview

The chapter points out what has been observed from data collection. The data was processed using Statistical Package for Social Sciences (SPSS) program and the results are also shown in the table below. Descriptive statistics has been used to give the status of the banks progress while regression model is used to test significant relationship between the return on average total assets, return on average total equity and total debt to total assets.

4.2   Findings from CRDB plc

4.2.1   Descriptive Statistics Analysis

The data obtained from CRDB plc since 2007 to 2013 were analyzed statistically and the results are as shown in the table below:

Table 4.1: Descriptive Statistics for CRDB Plc

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	7	2.03	5.07	3.6971	0.99398
ROE	7	15.45	32.99	25.3557	5.69052
DR	7	88.80	90.84	89.9486	0.69408
Valid N (listwise)	7				

Source: Survey results 2014

The performance of management in utilizing the assets of the bank (ROA) is 3.7% as an average score. This means that; for every Tsh 100/= invested in the operations earns Tsh 3.70/= in one year. The minimum ROA is 2.03% and maximum is 5.07%

which were obtained in 2011 and 2007 respectively. Now the bank is providing the

interest rate 3% per year for saving deposit accounts which is 0.7% below average

and no interest given to the current deposit accounts. On average each Tsh 100/= of

stockholder's fund earns Tsh 25.36/= which is measured by ROE obtained as 25.36%

as an average score. The maximum ROE is 32.99% obtained in 2008 and the

minimum is 15.45% obtained in 2011. The bank has an average debt of 89.95% for

which 88.80% is the minimum and 90.84% is the maximum with standard deviation

of 0.69% which occurred in 2009 and 2007 respectively. This means that in average

the shareholders' funds makes 10.05% of total funds of the bank.

4.2.2   Regression Analysis

The results from analysis of the data shows the change in return on Assets (ROA)

and return on Equity (ROE) is not explained with the change in DR this is due to the

meaning of a negative value for adjusted R square which cannot be a negative value

as shown in the table below: with these results the changes of ROA and ROE are not

due to the changes in DR.

Table 4.2: Models Summary for CRDB

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1 -ROA	0.109[a]	0.012	-0.186	1.08240
2- ROE	0.083[a]	0.007	-0.192	6.21234

a. Predictors: (Constant), DR

Source: Survey results 2014

The author decided to expand the data so as to increase confidence with period from seven (7) year to fourteen (14) year. This means that considering data from 2000 to 2013 for which the results are as shown below in the table.

Table 4.3: Models Summary for Extended Period (2000-2013)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1 - ROA	0.615^a	0.378	0.326	1.13056
2 - ROE	0.036^a	0.001	-0.082	11.93059

a. Predictors: (Constant), DR

Source: Survey results 2014

A negative value of adjusted R square is obtained for ROE which means still the changes of ROE are not explained by the changes in DR. But at this length of period of 14 years the changes of ROA are explained by DR at 32.6% which is the value of adjusted R square. Further to see if the changes at 32.6% are significant the coefficients of the model are generated as shown below:

Table 4.4: Coefficients for Model 1 From CRDB at 14 Years

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	26.515	8.680		3.055	0.010
DR	- 0.256	0.095	- 0.615	-2.699	0.019

a. Dependent Variable: ROA

Source: Survey results 2014

The results show a negative significant value of 'b' which is –0.256 with a constant of 26.515. These values can be used to model the regression model from figure 2.2 as shown below:

$$ROA = 26.515 - 0.255DR$$

Figure 4.1: Regression equation for ROA

Thus, there is a negative relationship between Return on assets and Debt Ratio (DR)

This equation can be simulated as shown in the table below:

Table 4.5: Simulation for ROA using equation

ROA = 26.515 - 0.256DR			
a	**b**	**DR%**	**ROA%**
26.515	-0.256	10	23.955
26.515	-0.256	20	21.395
26.515	-0.256	30	18.835
26.515	-0.256	40	16.275
26.515	-0.256	50	13.715
26.515	-0.256	60	11.155
26.515	-0.256	70	8.595
26.515	-0.256	80	6.035
26.515	-0.256	90	3.475
26.515	-0.256	100	0.915

Source: Author's Compilation through Simulation

The management performance is affected negatively with increase in debt. The equation is explained by 33% only and 67 is unexplained.

4.3   Findings from NMB plc

4.2.3   Descriptive Statistic Analysis

The profitability measured by ROA in average is 5.18%. Its meaning is that to every

Tsh 100/= invested the management makes the return of Tsh 5.18/= per year and its

variation from one year to another is approximately 0.80.

Table 4.6: Descriptive Statistics for NMB Plc

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	6	4.2	6.2	5.183	0.7960
ROE	6	25.5	34.6	29.583	3.4919
DR	6	86.1	89.1	87.683	1.1771
Valid N (listwise)	6				

Source**:** Survey Results, 2014

The profitability measured by ROA in average is 5.18%. Its meaning is that to every

Tsh 100/= invested the management makes the return of Tsh 5.18/= per year and its

variation from one year to another is approximately 0.80.

The minimum ROA is 4.2% in 2010 and the maximum is 6.2% in 2013. The mean

value of ROE is 29.56% the minimum and maximum being 25.5% and 34.6%

respectively. Therefore in average every Tsh 100/= of shareholders' funds earn Tsh

29.56/=. The bank has debt ratio which ranges between 86.50% and 88.86%. This

means that the level of debt in the capital structure is high compared with equity

funds which amount to 12.32%.

4.2.4   Regression Analysis

Table 4.7: Models Summary for NMB

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1 - ROA	0.713ª	0.509	0.386	0.6238
2 - ROE	0.363ª	0.132	-0.085	3.6377

a. Predictors: (Constant), DR

Source: Survey Results, 2014

The changes of ROA are explained by changes in DR at a level of 38.6% which is the value of adjusted R square. The negative value of adjusted R square implies that the changes of ROE are not explained by DR since the value of R square cannot be a negative value. The change in ROA is explained by DR but its significance is obtained in the table of coefficients below:

Table 4.8: Coefficients for NMB Plc

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	47.475	20.782		2.284	0.084
	DR	-0.482	0.237	-.713	-2.035	0.112

a. Dependent Variable: ROA

Source**:** Survey Results, 2014

The value of 'b' is not significant at 0.05% .Trying to increase the length of the period from 2000 to 2013 it was not possible since some data have not been published and made public. Furthermore the bank is younger since initially started as

payment and saving service provider own by government in which its status is shown below.

1997   = Its establishment

2005   = It became private by selling 49% of its shares to a consortium led by the Coöperatieve Centrale Raiffeisen-Boerenleenbank B.A. ('Rabobank Group'

2008   = It became listed in Dar es salaam stock exchange by selling further its 21% of its share in the public.

It can be seen that since 1997 to 2005 the bank was owned by the government in which it was not structured to making business except payment and saving services only.

4.4   Findings from DCB plc

4.2.5   Descriptive Statistics Analysis

The bank has publicized few financial reports only reports for 2010 to 2013 are publicized. When the data obtained was analysed the average ROA was 3.73% with minimum and maximum of 2.6 and 4.6 respectively. That means to every Tsh100/= invested in the operation earns a profit of Tsh3.73/= .The average ROE is 14.47 with standard deviation of 5.8 showing that there is a large difference in annual returns from year to year. The bank's capital structure composes 80.2% debt with the rest being fund of shareholders. The minimum debt level is 77.8% and the maximum being 83.4% with standard deviation of 2.88.

Table 4.9: Descriptive Statistics for DCB Plc

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	3	2.6	4.6	3.733	1.0263
ROE	3	9.4	20.8	14.467	5.8046
DR	3	77.8	83.4	80.200	2.8844
Valid N (listwise)	3				

Source: Analysis results

Source: Survey Results, 2014

4.2.6   Regression Analysis

Table 4.10: Models Summary for DCB Plc

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1-ROA	0.622ª	0.387	0.080	0.86648
2-ROE	0.883ª	0.780	0.670	3.37484

a. Predictors: (Constant), DR

Source: Survey Results, 2014

The values of adjusted R squares are 0.08 and 0.67 for ROA and ROE respectively which means that 8% and 67% of ROA and ROE are explained by the changes of DR. But these changes can be determined if they are significant or not by generating the coefficients of values of variables of the regression equation as shown below.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1-ROA	(Constant)	-10.496	12.839		-.818	0.500
	DR	.177	.158	.622	1.123	0.378
1-ROE	(Constant) DR	-116.915 1.638	50.005 0.615	0.883	-2.338 2.663	0.144 0.117

The results in the table above are not significant therefore the changes on ROA and ROE are not resulted by the change in DR. It has been also found that the bank is new in the market with the following back ground:

2001 = the year of establishment to operate as a limited company,

2002 = started business as a regional microfinance institution,

2003 = bank was issued with a license to carry out banking business as Dar es Salaam Community Bank Limited,

2005 = the bank broke – even, (revenues became equal to expenses). The bank stopped making a loss,

2008 = the bank was listed in Dar es Salaam stock exchange

2012 = the bank was registered to operate in all regions of Tanzania

The background of the bank indicates that the bank has been operating in Dar es Salaam since its establishment up to the year 2012. Currently the bank has only seven (7) branches in Dar es Salaam.

4.5 **Summary of Results**

Table 4.12: Average Values of Profitability and Financial Leverage Measures

Bank	Profitability		Financial leverage
	ROA%	**ROE%**	**DR%**
CRDB	3.7	25.4	89.9
NMB	5.2	29.6	87.7
DCB	3.7	14.5	80.2

Source: My compilation

The change in DR does not change the value of ROE however an increase in DR results in the decrease in ROA but it cannot reach zero value, at DR equal to 100% which is the maximum value.
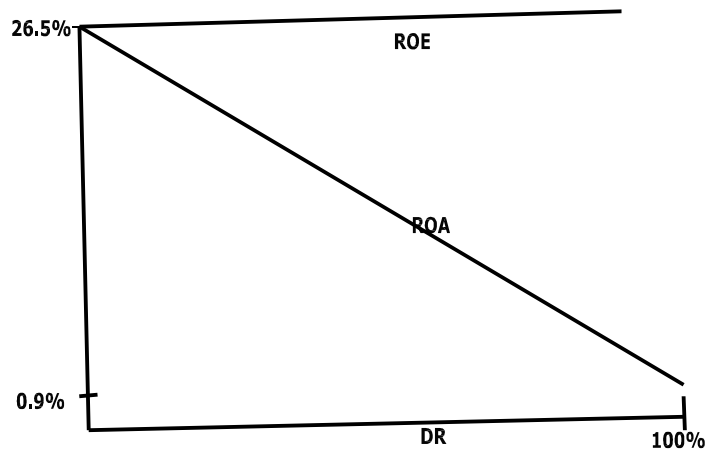
Figure 4.2: Effect of Financial Leverage on Profitability

Source: Author's compilation

CHAPTER FIVE

5.0   DISCUSSION

The sector is very small and immerging in the economy with CRDB as a leading bank having the total capital of Tsh. 3,545,220,000,000/= followed by NMB with total capital of Tsh.   3,280,186,000,000/=. Out of this capital most are debts made by deposits of customers. The performances of the banks in utilizing the available capital are very low which are 3.7%, 5.2% and 3.7% for CRDB, NMB and DCB respectively compared with theoretical value of 15% and more.

The returns on average shareholders' fund (ROE) are 25.4%, 29.6% and 14.5% for CRDB, NMB and DCB respectively as an average. The ROE is large compared to ROA since the banks has higher debt compared with owner fund in the capital structure as stated in the theoretical part above which is making the shareholders to benefit more. The shareholders for CRDB and NMB are receiving reasonable return to their invested funds but for DCB is very low which it is injustice.

By considering the effect of financial leverage on profitability measured by ROE first the findings of the research has agreed with Modigliani and Miller theory and Yegonl at el (2012) conducted in Kenya since the financial leverage measured by debt ratio (DR) has a no impact on profitability measured by Return On average Equity (ROE) even at extended data from CRDB. Modigliani and Miller proposed that financial leverage is irrelevant. But the findings disagree with pecking order theory, agency cost theory and trade off theory. Pecking order and agency theories

claim that financial leverage has positive impact to the firm's profitability while the trade- off theory states that the financial leverage has positive impact when optimized.

The effect of financial leverage on profitability measured by Return on Asset (ROA) requires much data at least fourteen years of operation; this was shown by the data from CRDB when the period of 2000 to 2013 was considered. The changes are explained by 33% only while 67% is unexplained. It can be assumed that the effect is to all the banks started. This is because at a period of seven years ROA is not affect by changes of DR to all banks but when the data is extended for CRDB to fourteen year the negative significance effect is explained for ROA only. This results disagree with Muhammad at el (2013) who conducted a similar study in Pakistani who found a positive relationship and agree with Velnampy &Niresh (2012) in sri lank, Dadson&Jamil (2012) in Ghana, Mohamad (2012) in Malaysia, Bokhari at el (2013) in Pakistani, Osuju &Oditha (2012) in Nigeria, Maina, L. & Ishmail, M. (2014) in Kenya and Goyal (2014) in India who had found a negative relationship between financial leverage and profitability.

CHAPTER SIX

6.0   CONCLUSION AND RECOMMENDATIONS

This study tried to examine the relationship between financial leverage and profitability of list commercial banks at Dar es Salaam stock exchange namely CRDB, NMB and DCB. There are only four commercial banks listed in Dar es Salaam stock exchange but one was not studied since it did not meet the criteria which were set in this study and is called Maendeleo Plc. The study used data from audited financial statements since 2007 to 2013 using descriptive and regression analysis. It extend the period for CRDB bank to see the impact of leverage for a long period since 2000 to 2013.

The findings are that the public commercial bank in Tanzania is emerging sector in the economy which is making good profit to stockholders but with poor performance in utilization of available resources. It also has been found that the profit made to stockholder is not effect with the level of debt of the bank but the level of the debt decreases the performance measured by ROA. These results help the beneficiaries to make decision related to their needs, but the bank managers do benefit from knowing that they should not depend on deposits from customers but must finance their operation by using much money from the stockholders through selling more shares in the public through the stock market and retain the annual profits obtained. From the following results these advice are provided to the following:

6.1   To Commercial Bank's Managers

The bank's management is advised to do the following:

i).   CRDB and NMB banks much set money to support community development as corporate social responsibility because the profit they are making is from the deposits of the community in they are operating.

ii).   Credit management: proper credit management must be laid down and implemented in order to minimize losses from lender default. This can be including more valuable collateral arrangements.

iii).   Minimize operating and employees benefit expenses by employing telecommunication technology in all financial transaction like deposit taking, and cash draws.

In respect with this research the banks under the study need to mobilize deposits as much as possible since there is no negative effect with respect to the level of debt in the capital structure. This can be done by good customer care and by introducing technological innovated products of bank services.

6.2   To Government

The government is advised to do the followings:

i).   Through central bank (BOT), proper regulations and policies must be set to allow the circulation of money at individual level rather than as it is now that much money is owned by business and few individuals not the community at large.

ii).   The government also should lay and implement proper payment system to allow all transaction to be done through commercial banks.

In the future, studies are required to examine the factors which affect the profitability of the commercial banks in Tanzania. The concentration can be made on variables like size of the bank, privatization of banks, composition of banks assets, cost and decisions of bank's management regulations and restrictions from government.

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APPENDICES

APPENDIX I: Questionnaire for Data Collection

DATA FROM XXX PLC Amount in Tsh.					
YEAR	ASSETS	LIABILITY	NET INCOME	OPERATING INCOME	EQUITY
2007					
2008					
2009					
2010					
2011					
2012					
2013					

APPENDIX II: Data from CRDB PLC

YEAR	ASSETS	LIABILITY	NET INCOME	OPERATING INCOME	EQUITY
	DATA FROM CRDB PLC **Amount in Tsh'Milions**				
2007	1,142,670	1,038,042	37,325	51,703	104,628
2008	1,449,800	1,308,867	40,509	60,004	140,933
2009	1,854,867	1,647,093	45,824	61,921	207,774
2010	2,305,224	2,071,713	47,246	64,134	233,511
2011	2,713,641	2,458,877	37,710	51,013	254,764
2012	3,074,816	2,757,384	80,543	107,702	317,432
2013	3,545,220	3,174,936	83,607	119,282	370,284

APPENDIX III: Worksheet results for CRDB PLC

YEAR	ROA%	ROE%	DR%
2007	5.07	28.90	90.84
2008	4.63	32.99	90.28
2009	3.75	26.28	88.80
2010	3.08	21.41	89.87
2011	2.03	15.45	90.61
2012	3.72	28.15	89.68
2013	3.60	24.31	89.56

Note: The ratios are calculated using the formula below with data from the table above.

$$ROE = \frac{Liability}{Assets} \times 100\%$$

$$ROA = \frac{Operating\ income}{Assets} \times 100\%$$

$$ROE = \frac{Net\ income}{Equity} \times 100\%$$

APPENDIX IV: Data from NMB PLC

DATA FROM NMB PLC Amount in Tsh' Millions					
YEAR	**ASSETS**	**LIABILITY**	**NET INCOME**	**OPERATING INCOME**	**EQUITY**
2007	1,158,309	1,036,326	38,835	57,927	121,983
2008	1,384,268	1,224,579	48,707	70,935	159,689
2009	1,669,333	1,477,095	47,550	68,038	192,238
2010	2,107,079	1,876,561	53,981	78,445	230,518
2011	2,170,243	1,884,981	71,789	102,736	285,262
2012	2,800,747	2,436,367	97,322	144,662	364,380
2013	3,280,186	2,823,520	133,906	188,131	456,666

APPENDIX V: Worksheet results for NMB PLC

| YEAR	DR%	ROA%	ROE%
2008	88.5	5.6	34.6
2009	88.5	4.5	27.0
2010	89.1	4.2	25.5
2011	86.9	4.8	27.8
2012	87.0	5.8	30.0
2013	86.1	6.2	32.6

Note: The ratios are calculated using the formula below with data from the table

above.

$$ROE = \frac{Liability}{Assets} \times 100\%$$

$$ROA = \frac{Operating\ income}{Assets} \times 100\%$$

$$ROE = \frac{Net\ income}{Equity} \times 100\%$$

APPENDIX VI: Data from DCB PLC

YEAR	ASSETS	LIABILITY	NET INCOME	OPERATING INCOME	EQUITY
DATA FROM DCB PLC **Amount in Tsh' Millions**					
2010	95,213	80,395	3,166	4,243	14,818
2011	99,359	82,834	3,262	4,437	16,525
2012	117,440	93,238	1,908	2,841	24,202
2013	143,969	111,988	3,711	5,220	31,982

APPENDIX VII: Worksheet results for DCB PLC

YEAR	DR%	ROA%	ROE%
2011	83.4	4.6	20.8
2012	79.4	2.6	9.4
2013	77.8	4.0	13.2

**Note:** The ratios are calculated using the formula below with data from the table above.

$$ROE = \frac{Liability}{Assets} \times 100\%$$

$$ROA = \frac{Operating\ income}{Assets} \times 100\%$$

$$ROE = \frac{Net\ income}{Equity} \times 100\%$$

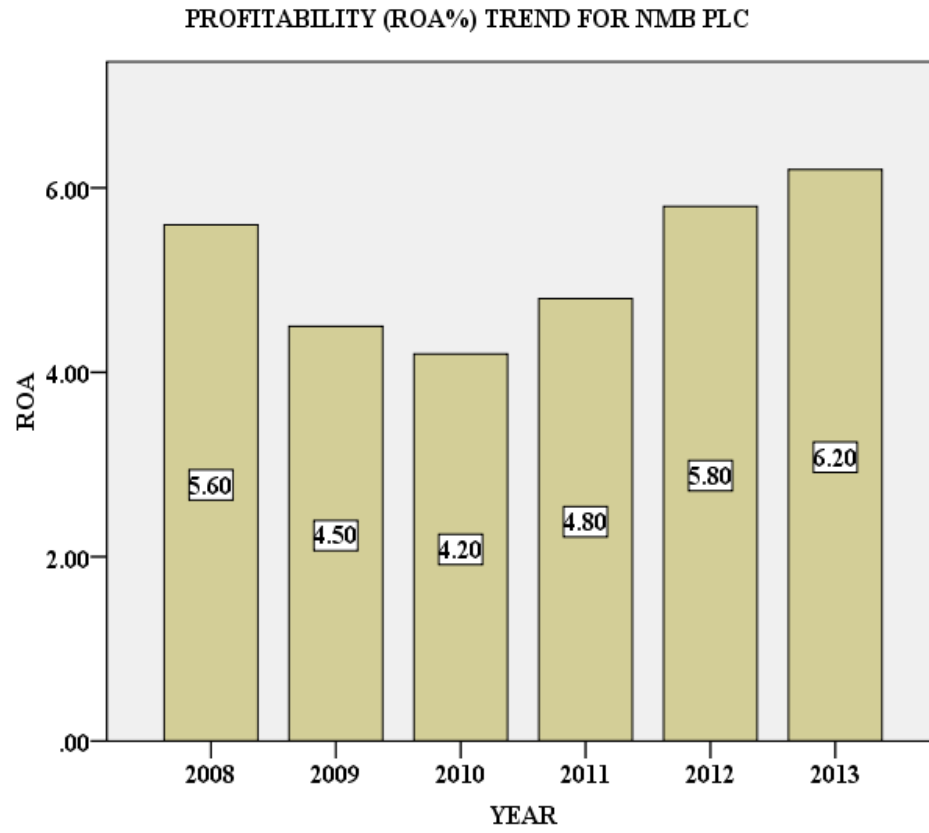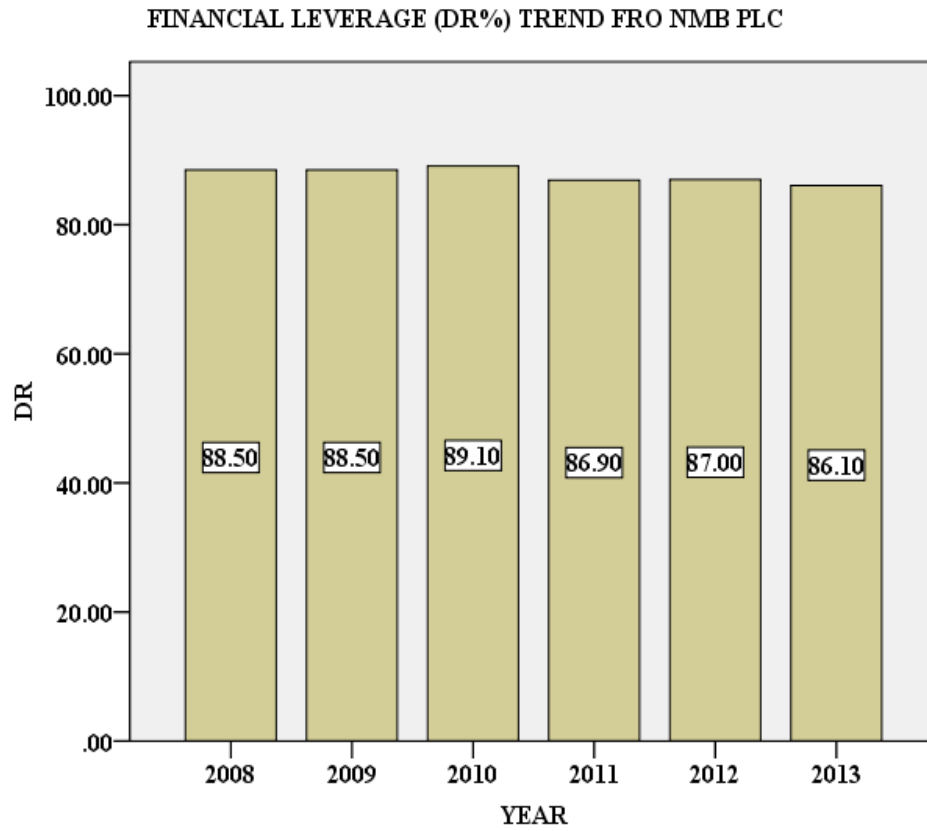**APPPENDIX VIII: Profitability (ROE%) Trend for CRDB PLC**

PROFITABILITY (ROE%) TREND FOR CRDB PLC
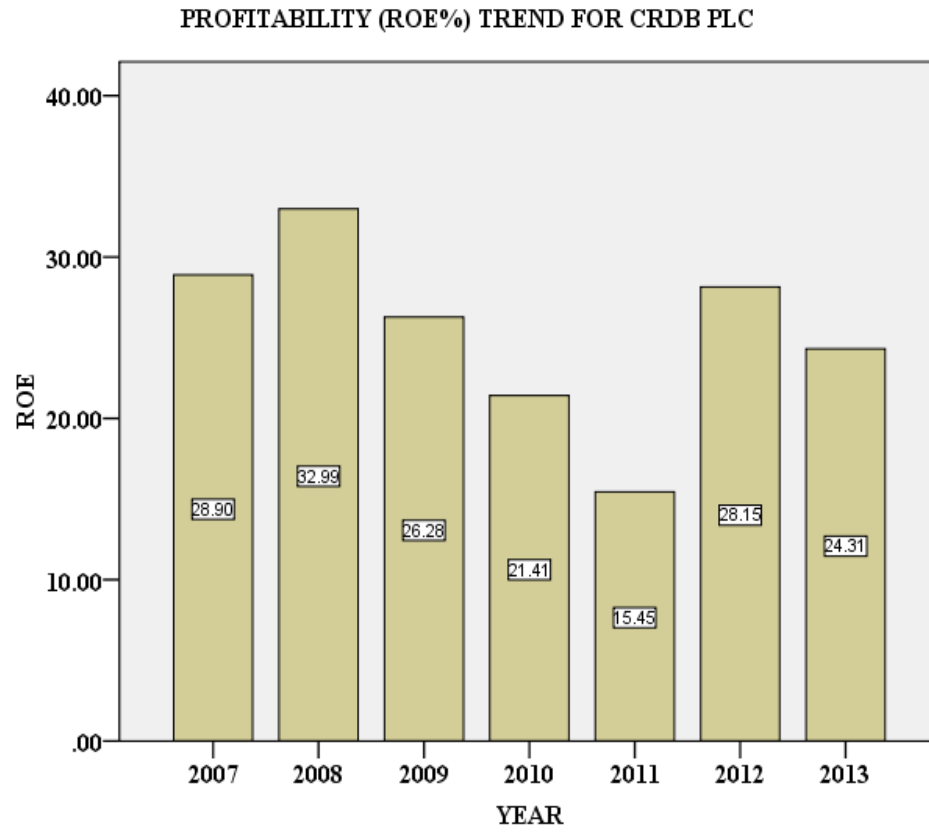
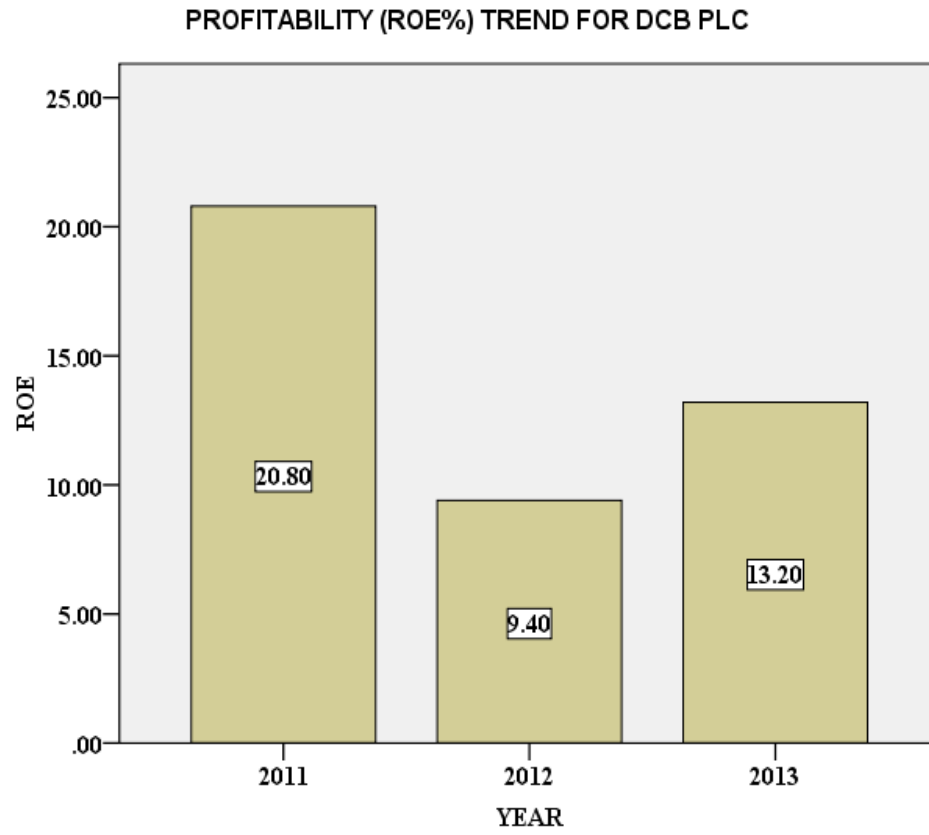**APPENDIX IX: Profitability (ROA %) Trend for CRDB PLC**

PROFITABILITY (ROA%) TREND FOR CRDB
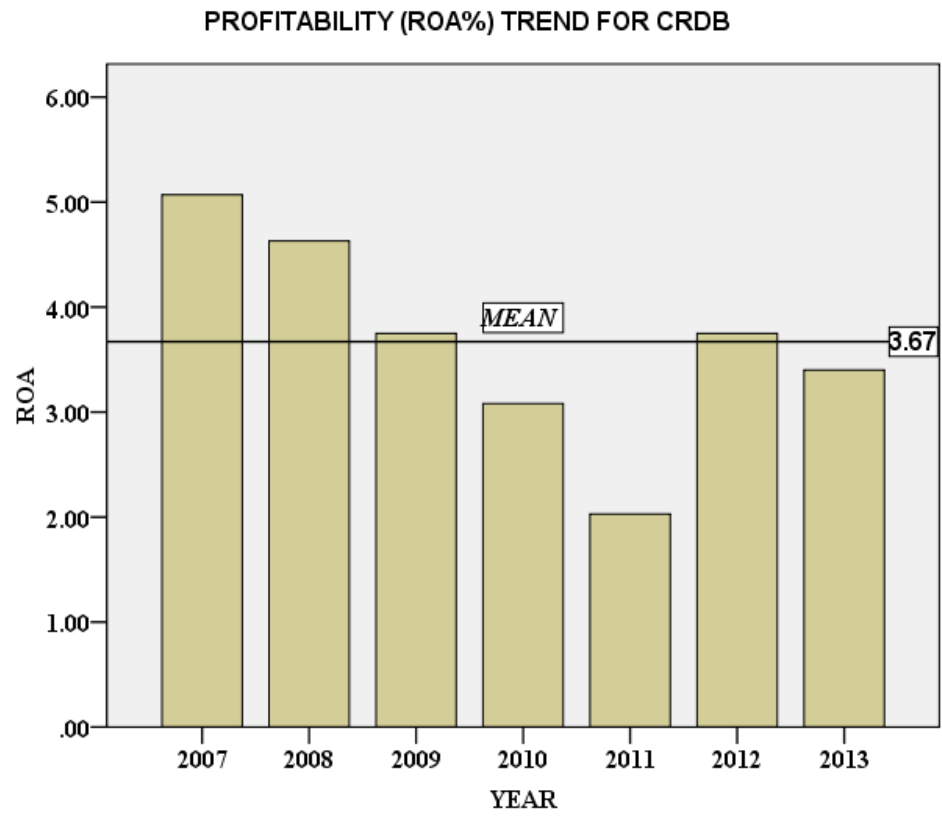
APPENDIX X: Financial Leverage (DR %) trend for CRDB PLC
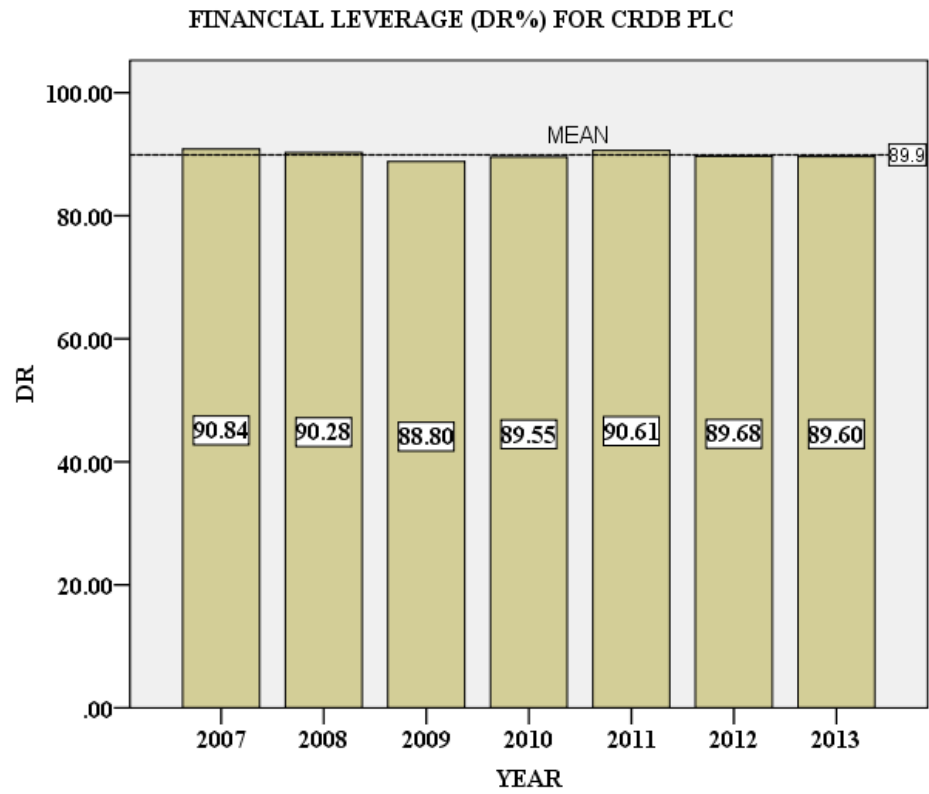
FINANCIAL LEVERAGE (DR%) FOR CRDB PLC

**APPENDIX XII: Profitability (ROE %) Trend for NMB PLC**

PROFITABILITY (ROE) TREND FOR NMB PLC

APPENDIX XII: Profitability (ROA %) Trend for NMB PLC
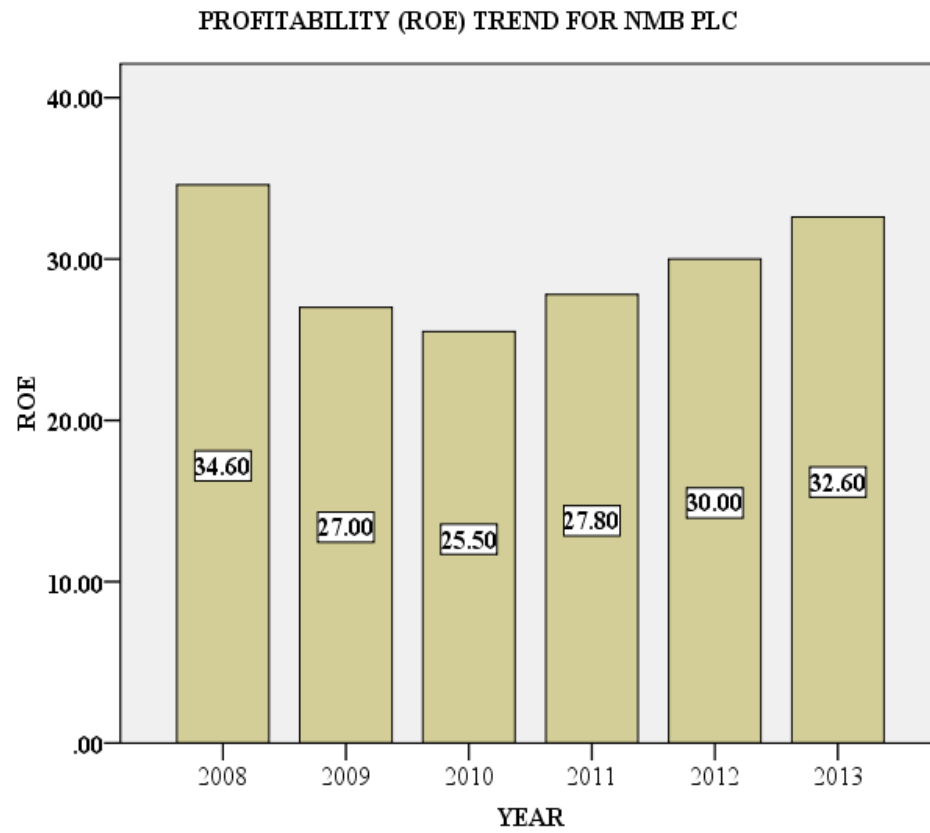
PROFITABILITY (ROA%) TREND FOR NMB PLC

APPENDIX XIII: Financial Leverage (DR%) Trend for NMB PLC

FINANCIAL LEVERAGE (DR%) TREND FRO NMB PLC

APPENDIX XIV: Profitability (ROE %) Trend for DCB PLC

PROFITABILITY (ROE%) TREND FOR DCB PLC

APPENDIX XV: Profitability (ROA %) trend for DCB PLC

PROFITABILITY(ROA%) TREND FOR DCB PLC
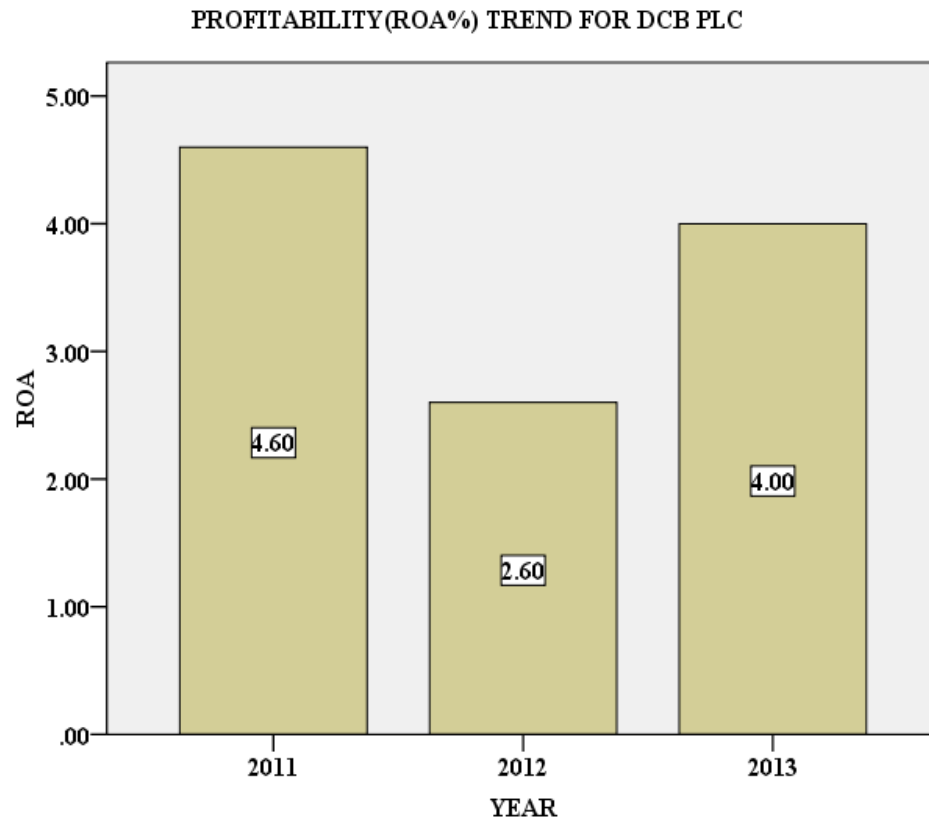
APPENDIX XVI: Financial Leverage (DR %) Trend for DCB PLC

FINANCIAL LEVERAGE (DR%) TREND FOR DCB PLC