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**FACULTY OF COMMERCE**

**DEPARTMENT OF ACCOUNTING**

**ANALYSING THE IMPACT OF CAPITAL STRUCTURE ON BANK'S  
FINANCIAL PERFORMANCE IN ZIMBABWE**

**PREPARED BY**

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*This dissertation is submitted to the department of Accounting in partial fulfilment of the requirements of the Bachelor of Commerce Accounting (Honours) Degree.*

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I R147343w do hereby declare that research report entitled: **Impact of capital structure on bank's financial performance in Zimbabwe** is entirely my original work, except where acknowledged, and that it has never been submitted before to any other university or any other institution of higher learning for the award of a Degree.

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## **DEDICATION**

This project is dedicated to my Mum for the prayers and encouragement.

May the Lord, God Almighty bless her abundantly.

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I would like to thank God for giving me strength in my research. I would also want to express my gratitude to the Accounting department and my research supervisor Mr. C Kazembe for helping me throughout my research. Special thanks to my husband and my friend Valentine for their help and support during the course of my research.

## **ABSTRACT**

This research seeks to examine the impact of capital structure on bank's financial performance in Zimbabwe. The study employed a sample size of ten banks over the period 2013-2017. In conducting this research, the researcher used a mixed approach that was both qualitative and quantitative. Data was collected through audited financial statements and interviews. Quantitative and qualitative methods of data analysis were used that was descriptive statistics, correlation, regression techniques and conclusions of uniform patterns of the data. The result reveals that capital structure measured by debit-equity ratio has negative relationship with financial performance measured by ROA and ROE and capital structure measured by equity multiplier has weak positive influence on financial performance. Subsequently, the researcher recommends that banks should not rely on debt financing but to strike a balance between their choices of capital structure.

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## **LIST OF ABBREVIATION / ACRONYMS**

DE.....	Debt to equity
EM.....	Equity multiplier
ROA.....	Return on assets
ROE.....	Return on equity
ZSE.....	Zimbabwe Stock Exchange

## CHAPTER ONE

### INTRODUCTION

#### 1.0 Introduction

This chapter explains the background to the study, justification of the study, research objectives, research question, significance of the study, delimitations, limitations and summary.

#### 1.1 Background of the study

To understand how banks finance their operation, it is necessary to examine the determinants of their financing and capital structure decisions. The term capital structure is used to represent the proportion between debt and equity, where equity includes paid-up capital, share premium, and all reserves and surplus, (Mubeen et al, 2016). The financing or capital structure decision is a significant managerial decision, as it influences the shareholder return and risk. The bank has to plan its capital structure initially at the time of its promotion. Subsequently, whether the funds have to be raised, a capital structure decision is involved.

The relationship between capital structure and financial performance is one that received considerable attention in finance literature. How important is the concentration control for the bank's performance or type of investors exerting that control are questions that many scholars have tried to answer for a long time. The bank value is determined by its basic earning power, however by taking the effect of tax advantage on debt, the bank value can be increased by incorporating more debt into the capital structure. This optimal capital structure is determined by trade-off of the benefit of using debt known as tax saving and the cost of debt such as agency cost. Schepens (2016) argued that more equal treatment of debt and equity significantly increases bank capital ratio driven by an increase in common equity, which ultimately impacts the choice of banks. This is show in table 1.1 below.

**Table 1.1 Debt to Equity ratios vs. Profit to Revenue**

Details	Year	CBZ	FBC	NMB	ZB	POSB	Stanchart	Agribank
<b>DE ratio</b>	2013	6.57:1	3.34:1	4.94:1	3.94:1	9.67:1	13.39:1	16.8:1
<b>Profit</b>	2013	24%	25%	-7%	-0.11%	51%	24%	34%
<b>DE ratio</b>	2014	7.20:1	5.41:1	6.35:1	1.39:1	10.62:1	14.53:1	17.6:1
<b>Profit</b>	2014	21%	13%	4.60%	-16%	56%	22%	37%
<b>DE ratio</b>	2015	7.53:1	4.67:1	6.60:1	1.32:1	10.28:1	12.20:1	18.1:1
<b>Profit</b>	2015	19%	30%	12%	16%	54%	-23%	29%
<b>DE ratio</b>	2016	7.37:1	4.93:1	5.77:1	1.29:1	9.74:1	12.29:1	18.1:1
<b>Profit</b>	2016	15	21%	13%	18%	59%	-2.40%	30%
<b>DE ratio</b>	2017	6.08:1	3.93:1	4.71:1	1.20:1	9.86:1	11.81:1	17.4:1
<b>Profit</b>	2017	17%	35%	7%	20%	37%	9%	35%

*Source: Author's computation 2018*

Table 1.1 above shows debt to equity ratio of commercial banks from the period of 2013 to 2017 and their profit for the same period. Debt-equity is the value of total liability at the end divided by owner's equity at the end of the period (Fred et al, 2014). If a bank has a total debt of \$ 231.4 for example CBZ Holdings for the year ended 2014 and total liabilities of \$ 1 438.7, the debt to equity formula is \$ 1 438.7 divided by \$ 231.4 and 6.20 will be the debt. Thus the ratio is expressed as 6.20:1 (620%) which means the bank has \$ 6.20 in debt for every \$ 1 of equity.

Lower values of debt-equity ratio are favorable indicating less risk. A higher debt-equity ratio is unfavorable because it means that the business relies more on external lenders thus it is a higher risk especially at higher rates. Debt-equity ratio of 1.00 means that half of the assets are financed by debts and half by shareholders equity. A value higher than 1.00 means that more assets are financed by debt than those which are financed by shareholders' funds and vice versa. An increase in trend in debt-equity ratio is also alarming because it means that the percentage of assets of a bank which are financed by debts is increasing.

For the purpose of operating a bank, intensity of debt or equity option used by the bank to finance its operations represents the bank's capital structure. If the banks are

financing through debt they have to pay the interest and if they are financing through equity they have to give the dividends to the shareholders from their profit and sometimes generate the retained earnings account that they did not distribute to the shareholders but reflecting their profit. The researcher will use secondary data in research in the shape of bank's financial performance measures in accounting terms like ROA and ROE ratios.

Studying the effect of capital structure and financial performance helps to understand the potential problems in performance and capital structure. The study of capital structure attempts to explain the mix of securities and financing sources used to finance investment. Financing tax benefit through the debt creates an incentive in managers that have the benefit of this type of financing. Also, failure to pay cost benefit and low risk in financing method, through the stock is also characteristic of this method (Muhummard et al 2013). Financial institutions seek debt levels that balance the tax advantages of additional debt against the costs of possible financial distress.

Understanding the relationship between debt and value could provide useful insights for investors for two reasons. Firstly, shareholders would be able to target optimal debt to equity ratios which may improve discipline of the managers but does not overburden a bank with extraneous interest payments. Secondly, debt holders will have a tool in hand to identify overleveraged and underleveraged banks. This may help them allocate their funds effectively.

### **1.3 Research problem**

The purpose of this research is to investigate the impact of bank's capital structure on their financial performance. It is quite problematic to design specific general optimal capital structure for a bank that maximize a bank's performance, profitability and shareholders wealth regardless of their size and other factors. The decision about the capital structure has the danger of violating agency cost theory. In capital structure decisions, a bank have to select the best possible capital structure that improves bank performance, lower agency costs and make shareholders better off at the end of the financing period. The literature review on the impact of capital structure on bank's financial performance is controversial and inconclusive as prior researchers found

divergent results on the effect of capital structure on banking performance. This had left a gap as researchers have mixed research conclusions. So, the researcher will explore this subject in a Zimbabwe context, as such researches were conducted in a different setting.

### **1.3 Justification of the Study**

It is hoped that this research will provide a sound and comprehensive theoretical and empirical literature on capital structure and its effects on bank's performance. Management team would be enlightened in making sound decisions regarding the appropriate capital structure. Financial analysts would benefit in making sound decisions when advising their clients on the portfolio selection. The study would also be of value to researchers and academicians who will use this work as a basis for further research.

### **1.5 Research objective**

The main objective of the study is to critically examine the relationship between capital structure and firm performance in commercial listed banks in Zimbabwe. The specific objectives are:

- To establish the impact of capital structure on bank financial performance.
- To identify the inter relationship between capital structure and bank performance.
- To determine the determinants of capital structure for Zimbabwean banks.
- To investigate other factors that may have potential to influence on financial performance of the bank.

### **1.6 Research question**

In this research, the researcher is going to answer the following research questions;

- How does capital structure affect bank financial performance?
- What kind of relationship exists between debt and equity of a bank?
- What are the determinants of capital structure for Zimbabwean banks?
- What are the other factors that may have potential to influence bank's financial performance?

## **1.7 Research hypothesis**

**H<sub>0</sub>**: the capital structure has significant impact on banking financial performance.

**H<sub>1</sub>**: there is positive relationship between capital structure and bank financial performance.

**H<sub>3</sub>**: there is a negative relationship between capital structure and bank financial performance.

## **1.8 Significance of the study**

### **1.8.1 To the researcher**

It is in partial fulfillment of the Bachelor of Commerce Accounting (Honors) Degree.

### **1.8.2 To the university**

The research provides a source of literature to other fellow students, other researchers and lecturers at the university. The impact of capital structure and bank's financial performance would be accessible from this research.

### **1.8.3 To banks**

Management team would be enlightened in making sound decisions regarding the appropriate capital structure that improves the bank's financial performance.

## **1.9 Assumptions**

- The researcher will obtain unbiased, complete and relevant data from informants.
- All respondents of the research project give the reflections of their opinions, attitudes and feelings towards capital structure and bank's financial performance.

## **1.10 Delimitation of the Study**

Of all the listed financial institutions, the study considers banks only. In terms of financial statements analysis, this study will only concentrate on data provided by Head Offices of these institutions on the assumption that all data from branches would have been factored into Head Office data.

The study will cover a period of five years from 2013 to 2017. This period was chosen due to the availability of data on the Zimbabwe Stock Exchange and bank's official web site over this time period. In analyzing financial leverage of a bank, the

study will look at ROA and ROE ratios of the banks as the key aspects that indicate financial performance.

### **1.11 Limitations of the Study**

Some of the secondary data will be gathered from published financial statements. Sometimes, published figures are not the best performance evaluation tools because they do not show some important items like banks' hidden reserves (Eric, 2017). For data analysis, the study will build a regression model. The model may be very much limited in terms of its quality for projections due to data insufficiency.

### **1.12 Definition of terms**

**Capital Structure** - the proportion between debt and equity that makes up the finances of a financial institution.

**Financial performance** -it is a process of measuring results of organisational operations and polices in monetary terms.

**Debt to Equity ratio** - a financial ratio that indicates the proportion of shareholder's equity and debt a company is using to financing its assets.

**Return on Equity** - the measure of return generated on the book value of shareholders equity.

### **1.13 Chapter Summary**

This chapter introduced the research and highlighted the study background, statement of the problem, objectives of the study, significance, delimitations of the study and limitations of the study were explained. The following chapter focuses on the literature pertaining to the impact of capital structure on financial performance of banks in Zimbabwe.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter reviews the literature from other authors and scholars that relates to the problem under study. It provides a discussion on what capital structure is and its impact on the financial performance of commercial banks by looking at some capital structure theories and their application in the banking sector. It highlights findings and conclusion drawn by other authors that relates to this study.

#### **2.1 Conceptual Review**

##### **2.1.1 Definitions**

###### **Literature Review**

Literature review is a text of a scholarly paper, which incorporates the current knowledge including substantive findings, as well as theoretical and methodological contributions to a particular topic (Galvan and Jose, 2015). Literature reviews are secondary sources, and do not report new or original experimental work.

###### **Capital Structure**

Capital structure is a company's owing or unsettled debt and equity. It tolerates a financial institution to understand the kind of funding the company uses to finance its overall activities and progression. According to Ajayi and Ghazali (2016), debt and equity are two key classes of liabilities with debt holders and equity holders representing two types of investors in the firm, each of these is coupled with different levels of risks, benefits and control. It is the way the corporation finances its assets through some combination of equity and debt. The rationale of capital structure is to provide an overview of the level of the organization's risk, the higher the proportion of debt a company has, the higher its exposure to risk will be (Lawal et al, 2014).

A bank's capital structure exhibits how its assets are financed. When a bank finances its operations by opening up or increasing capital to an investor, it avoids debt risk thus reducing the possibility that it will go bankrupt (Tim 2017). The proprietors may



choose debt funding and retain control over the bank, increasing returns on the processes. Debt takes the form of a bond issue, long term notes while equity is categorized as common stock, preferred stock or retained earnings. It is very imperative for a bank to manage its debt and equity financing because a auspicious ratio will be attractive to potential investors.

### **Financial performance**

Performance may be defined as the replication of the way in which resources of a bank are used in the form which enables it to realize its objectives (Javed and Akhtar, 2016). Financial performance is the employment of financial indicators to measure the extent of objective achievement, contribution to making existing financial resources and support of the bank with investment opportunities (Eric, 2017).

Shareholders measure financial performance by how better off there are at the end of the period than they were at the beginning of the period. This can be governed by using ratios from financial statements mainly the income statement and statement of financial position or data on financial market prices (Althenia, 2016). These ratios show whether the objective of making the owners wealthier is attained and can be used to compare a bank's ratios with other banks or to find trends of performance over time.

## **2.2 Theoretical review**

### **2.2.1 Irreverent and relevant theory**

Modiglian and Miller (1958) advocate capital structure irrelevance theory. The theory recommends that under certain assumptions that the valuation of a financial institution is unaltered by its capital structure. There is no bearing on the value of a firm whether it has a higher or a lower debt constituent in the financing mix. The theory states that the bank's future growth prospect affects the value of the firm, if a company has a high growth prospect its market value is higher and its stock price is also high. Modiglian and Miller assumes that capital market is perfect, where insiders and outsiders have free access to information; no taxes; no transaction cost for buying and selling securities as well as bankruptcy costs; the cost of borrowing is the same for investors as well as companies; debt financing does not distress companies EBIT;

There is a symmetry of information thus investors will have access to the same information and will behave rationally.

If these key assumptions are relaxed, capital structure may become relevant to the firm's value (Hool et al, 2015). Researchers have contributed to relaxing the ideal assumptions and describing its consequences. Attempts to relax those assumptions particularly the bankruptcy cost and no taxation led to the static trade-off theory.

### **2.2.2 Agency Cost Theory**

This is a theory which explains the affiliation between capital structure and financial performance. An agency relationship arises when shareholders hire managers (agents) to perform service and then delegate decision making authority to managers. The theory was initially developed by Berle and Means (1932) who argued that due to a continuous dilution of equity ownership of large corporations, ownership and control become separated. This situation gives professional managers an opportunity to pursue their interest instead of that of shareholders. An agency glitch between managers and shareholders then arises, where managers own less than hundred percent of shares of firm's assets due to disinclination of them to do their best to maximise shareholders wealth (Shah and Noreen 2016). Jensen (1986) considered the benefit of debt as a restriction of managerial discretion. He suggested that free cash flow problem can be controlled by the stake of managers in the business or by increasing debt in the capital structure thereby reducing the amount of free cash available to managers. Therefore, firms which are mostly financed by debt give managers less decision power of those financed mostly by equity, thus debt can be used as a control mechanism, in which lenders and shareholders become the principal parties in the corporate governance structure.

### **2.2.3 Pecking Order Theory**

Pecking order theory of capital structure was developed by Myers and Majluf (1984). The theory suggests that firms which initially use internal funds, then debt and if a project compels more funding, equity. Therefore, firms which are more profitable and generate adequate cash flows will use less debt. The theory explained the relationship between debt and financial performance through the information asymmetries and signaling thus the willingness of a firm to send signals about its quality. It is costly for a low quality firm to abuse market signals about its high quality by issuing more debt.

As a result, low quality firms have low amount of debt and the leverage increases with the value of a firm thus the higher the quality of the project manager wants to invest in, the higher the willingness of the manager to fascinate financing (Nwamaka and Ezeabasili, 2017). That is why a risky firm will end up with lower debt.

## **2.3 Review of Empirical studies**

### **2.3.1 Impact of capital structure on bank performance**

Scholars around the world have conceptualised capital structure decision with the performance of firms in different contexts and thus in different ways. They have noticed a positive impact, while others have logged either a negative effect or no effect.

#### **Findings in the Context of Zimbabwe**

**In the context of Zimbabwe**, Chinoda (2014) conducted a research on capital structure. The central objective of this study was to investigate the impact of capital structure on financial performance of firms listed on the Zimbabwe Stock Exchange. The study made use of panel data that were gathered from annual statements of 16 firms, for the period from 2009 to 2013. Four performance equations were estimated using the pooled-OLS estimation technique. Econometric estimates divulged that short term leverage to asset ratio (SLA) has a significant impact on firm performance measures ROA and ROE, while long term leverage to asset ratio (LLA) has a substantial influence on ROA only. Total leverage to asset ratio (TLA) was unearthed to have an insignificant impact on all firm performance evaluation measures while all the control variables (BVTA, AGE, GROW, RISK\_ROA, RISK\_ROE), save for asset tangibility (TANG), had significant impacts on ROA and ROE

#### **Positive Conclusions**

**In Africa**, Nirajini and Priya (2014) conducted a research on capital structure and financial performance during 2006 to 2010 (05 years) financial year of listed trading companies in Sri Lanka. Data was extracted from the annual reports of sample companies. Correlation and multiple regression analysis were used for analysis. The results revealed that there is positive relationship between capital structure and financial performance. Akeem et al (2014) using the data of 100 firms for 2001–2007,

observed a significant positive link of STDTA and TDTA with ROE. However, the authors observed an inverse association of LTDTA with ROE. The main drawback of this study was that they used only a single variable, ROE, to measure the performance.

**Outside Africa**, Nikoo (2015), by employing the data of 17 banks over a period of 2009–2014 from Tehran Stock Exchange, observed a significant positive effect of capital structure choice on the performance of the sampled banks. Lisa and Sandy, (2015) used data on 100 listed firms over a period of 2008–2013 and observed a significant positive association between the performance of a firm and capital structure. They used ROA, Earnings Per Share (EPS) and net profit margin as proxies to measure the performance and short-term debt obligations to total asset (STDTA), long-term debt obligations to total asset (LTDTA), and total debt obligations to total asset (TDTA) as the capital structure variables.

### **Negative conclusions**

**In Africa**, Lawal et al (2014) conducted a research on effect of capital structure on firm's performance with a case study of manufacturing companies in Nigeria from 2003 to 2012 with the purpose of providing a critical appraisal of the need and importance of capital structure. Descriptive and regression research technique was employed to consider the impact of some key variables such as Returns on asset (ROA), Returns on equity(ROE), Total debt to total asset(TD), Total debt to equity ratio(DE) on firm performance. They found that capital structure measures (total debt and debt to equity ratio) are negatively related to firm performance. They recommended that firms should use more of equity than debt in financing their business activities. Muritala (2015) examined the influence of using leverage in the capital structure on the performance of Nigerian firms. Data on ten firms was gathered over the period of 2008–2013 and, by applying panel least square approach, observed a negative influence of debt to total asset ratio on ROA.

**Outside Africa**, In contrast to the empirical studies that observed positive impacts, many researchers have also observed negative impacts. Ramadan and Ramadan (2015) analysed the data over the period of 2008–2012, with an aim to explore the impacts of capital structure variables, TDTA, LTDTA and STDTA, on the performance of firms. Abdel-Jalil (2014), by employing multiple regression analysis,

documented a significant inverse influence of debt ratio and the proportion of debt to equity on the rate of return generated from investment activities, ROI. Memon et al. (2016) checked the relationship of a capital structure decision with the performance of the Pakistani organisations, where the authors used ROA as a single measure of performance. They applied the log-linear regression model on some organisations for the period of 2004–2009 and reported a significantly negative association between TDTA and ROA. By using the ratio of debt to the total asset as a single proxy of capital structure and ROA as a proxy to measure the performance of firms, Muritala (2014) examined the influence of using leverage in the capital structure on the performance of Nigerian firms. They gathered data on ten firms over the period of 2009–2013 and, by applying panel least square approach, observed a negative influence of debt to total asset ratio on ROA.

It can be gleaned from the discussed empirical studies that the impact of capital structure decision on the performance of banks is not clear and most of the available evidence is inconclusive. Therefore, it brings an open ground for the academicians, researchers, firms, regulators and supervisors to explore and establish empirically the impacts of capital structure choice on the performance of banks.

### **2.3.2 Relationship between capital structure and performance**

The magnitude of financing decisions cannot be over emphasized as voluminous factors that contribute to business insolvency can be addressed using strategies and financial decisions that drive progression and the fulfillment of organizational objectives (Salazar, Soto and Mosqueda, 2016). The finance factor is the major source of financial distress (Membe and Nyanumba, 2014). Financial decisions result in a particular capital structure and suboptimal financing decisions can drastically yield corporate failure. A great dilemma for management and investors is whether there exists an optimal capital structure. The objective of all financing decisions is profit maximization and the abrupt approach of measuring the excellence of any financing decision is to scrutinize the effect of such a decision on the bank performance.

### **Findings in the context of Zimbabwe**

Jameson and Kadenga (2015) carried a research to investigate the relationship between capital intensity and the performance of banks in Zimbabwe for the period 2009-2013. They used semi-annual time-series data for fourteen banks. Data from

individual bank financial background complemented semi-annual data gathered from Reserve Bank of Zimbabwe, the Zimbabwe National Statistical Agency and the Zimbabwe Stock Exchange. The panel estimates illustrate a positive and statically insignificant relationship between capital levels and bank's performance. Wilford and Nathan (2014) carried out a research to investigate the relationship between capital structure and the performance in the hospitality and tourism sector of Zimbabwe. The thesis was based on four listed companies in the tourism and hospitality sector over the period 2009-2013. Data analysis was carried out applying Stata 10 through simple multiple regression techniques. Findings of their study proved that performance of firms is significantly affected by their capital structure and their relationship is negative nature.

### **Positive Relationship**

Javed and Akhtar (2016) explored the relationship between capital structure and financial performance. They wound up that there is a positive relationship between capital leverage, financial performance, growth and size of the banks. The thesis, which converged on the Karachi stock Exchange in Pakistan, utilized correlation and regression tests on financial data. In a separate study, Saeedi and Mahmoodi (2017) investigated the relationship between capital intensity and the performance of banks in the Tehran Stock Exchange. According to the study, market measures of performance are positively linked to capital structure whereas ROA is positively relatively related to capital structure, no significant relationship exists between ROE and capital structure. Mubeen et al (2005) carried out a research on the impact of capital structure on bank performance. They used various reversion models to assess the relationship capital structure and banking performance. Results of the study validated a positive relationship between factors of capital structures and performance of banking industry.

### **Negative Relationship**

**In Africa**, in an effort to validate MM theory in Kenya, Maina and Kondongo (2013) investigated the consequence of debt-equity ratio performance of firms listed at the Nairobi Stock Exchange. A census of all banks listed at the Nairobi Stock Exchange from year 2002-2011 was the sample. The study discovered a substantial negative relationship between capital structure (DE) and all measure of performance.

Kaumbutu (2016) conducted a study to establish the relationship between capital structure and return on equity for industrial and allied sectors in the Nairobi securities Exchange during the period 2004 to 2008. Capital structure was proxied by debt equity ratio while performance focused on return on equity. The study applied regression analysis and found a negative relationship between debt equity ratio and ROE. Adenkule (2016) used debt ratio to proxy capital structure while return on asset and return on equity were used as measures of bank's performance. The study used the Ordinary Least Squares method of estimation. The outcome of the study proved that debt ratio has a significant negative impact on the bank's measures of performance.

**Outside Africa**, Abdul (2015) carried out a similar study to establish the relationship between capital structure decisions and the bank's performance in Pakistan. The study therefore concluded that financial leverage has a significant negative relationship with bank performance as measured by ROA, GM, and Tobin's Q. The relationship between financial leverage and firm performance as measured by the return on equity (ROE) was negative but not statistically significant.

### **No Relationship**

Ebaid (2015) carried out a study to investigate the impact of capital structure on the performance of banks in Egypt. Performance was measured using ROA, ROE and gross profit margin. Capital structure was measured by short term debt to asset ratio, long term debt to asset ratio and total debt to total assets. Numerous regression analysis was applied to estimate the relationship between the leverage level and performance. The study revealed the capital structure has little to no impact on a firm's performance.

From the above discussion based on the results of empirical literature, it is clear that the investigation in the relationship between capital structure and financial performance are inconclusive and requires more empirical works.

### **2.3.3 Determinants of capital structure**

Determinants of capital structure are bank's individual factors that must be taken into account at the time of deciding and choosing a capital structure. A number of bank level characteristics have been identified in previous empirical studies examining

capital structure determinants and these encompass; firm size, asset tangibility, profitability and growth.

**Bank Size.** The size of the bank is expected to be positively related to its level of debt because larger organisations are perceived as more stable and thus more reliable from lender's point of view. Additional arguments in favor of this proposition are that, more resistant to shocks in the long run and they are often listed on the stock exchanges and more transparent which results in lower agency costs (Ana, 2015). However, this relationship is far from unambiguous. According to theory of information asymmetries, size may be inversely related to the amount of information available to external investors, who thus might prefer to hold equity rather than debt. Empirical studies by Muller (2015), Onaolapo et al. (2015) reported a positive relationship between leverage and firm size.

**Tangibility of assets.** Asset tangibility is considered to be one of the most significant determinants of firm's performance. According to literature, there is a positive relationship between asset tangibility and firm debt ratio that is. The more tangible assets the firm has, the more debt it can take. This is because if a firm has more tangible assets which it can easily convert into cash, it can increase its debt ratio since it can service the debt through its tangible assets in the event of liquidity.

**Profitability.** According to the conventional wisdom, the borrowing needs of the profitable organisations are lower, which is in line with the pecking order theory, Sasho (2016). On the other hand, more profitable companies find it easier to borrow as a result of the less certain cash flows. The static trade off theory implies that the more profitable companies are induced to borrow more, because the non-debt tax shield are functional only when the company makes profits. These arguments however, fail to distinguish between accounting profits and cash flow which are far more useful when borrowing needs are estimated. The free cash flow theory also supports the view that the organisations with vast profits should use more debt as a safeguard from managerial self-dealing (Jensen, 1986). Myers (1984) found that firms that are profitable and having the capacity to generate high earnings use less debt capital to equity than those that do not spawn high incomes. This negative relationship between debt ratio and profitability is supported by Mutenheri and Munangagwa



(2015), Mazadzi and Maseya (2015), Tharmalingan and Banda (2016), Acaravci (2015).

**Growth.** According to the pecking order theory, the desire for faster growth at a constant level of profitability necessitates the usage of more debt. The theory of information asymmetries implies that the organizations with strong potential should avoid issuing new equity because the market undervalues their shares. On the other hand, the market timing theory asserts that when price to book (P/B) ratios are high, which is an indicator of the growth potential of an organization, issuing equity is advisable, Anshu and Kapil (2014). Finally, the trade-off theory links growth to the rising risk of financial distress and the accompanying debt related agency problems (Myers, 1977). Vanasithambly (2014), Ahmad (2015), Sasho and Aleksandor (2015) found a positive relationship between debt ratio and growth.

#### **2.3.4 Other factors that may have potential to influence on banks financial performance.**

Commercial banks in Zimbabwe play a crucial inter-mediation position of transferring funds from the surplus units to deficit units, therefore monitoring their performance and aspects that influence the performance of commercial banks is of paramount importance for the policy formulation and thus to the economy of Zimbabwe. The determinants of bank performance can be classified into bank internal and external factors. Internal factors are bank attributes which are basically influenced by internal decisions of management and the board. External factors are country wide factors which are beyond the jurisdiction of a bank and modify the profitability of banks. CAMEL framework often used by scholars to proxy the bank particular factors when analyzing the determinants of financial performance, (Muluaem, 2014). CAMEL stands for Capital Adequacy, Asset Quality, Management Efficiency, Earnings Ability and Liquidity, Muluaem (2015). Each of those indicators is discussed below.

##### **Capital Adequacy**

Capital is the amount of own fund accessible to sustain the bank business and act as a buffer in case of adverse situation (Eric, 2017). Capital adequacy is the level of capital required by the banks to enable it to withstand the menace such as credit, market and operational risk they are exposed to in order to hedge against the potential losses and protect the bank's debtors. According to Eric (2014), the adequacy of capital is judged

on the basis of capital adequacy ratio. The ratio measures the internal muscle of the bank to withstand losses during crises. The ratio has a uninterrupted effect on the profitability of banks by determining its expansion to risky but profitable ventures or areas (Robson and Normam 2016).

Jha and Hui (2015) conducted a study that compared the financial performance of different ownership structures of commercial banks in Nepal based on their financial characteristics. The research results divulged the return on assets was significantly influenced by capital adequacy ratio, interest expenses to total loan and net interest margin, whereas capital adequacy ratio substantial effect on return on equity. Similarly, from the findings conducted by Olweny and Shipho (2015) in Kenya, it can be noted that banks that improve their capital base, condense operational costs and employ revenue diversification strategies are likely to be more profitable.

### **Credit Risk**

Credit risk management is a process of decision making which involves curtailing losses from both bad debts and costs of debts operation while maximising the value of credit sales. The solvency of financial institutions is typically at risk when their assets become impaired, so it is important to monitor indicators of the eminence of their assets in terms of over exposure to specific risk trends in non-performing loans and the health and profitability of bank borrowers, Odongo (2014). Credit risk is inherent in lending which is the foremost banking business. It arises when a borrower defaults on their payment agreement. A financial institution whose borrower defaults on their payment may face cash flow hindrances which eventually affect its liquidity position. Ultimately, this impacts negatively on the profitability of a bank. The highest risk facing a bank is the losses derived from delinquent loans Amao and Olawale (2014) thus non-performing loan ratios are the best proxies for Asset Quality. Non-performing loans alter the profitability of the bank.

Mutua (2014) conducted a research to investigate the effects of credit risk management on the financial performance of commercial banks in Kenya. The study revealed that sixty four percent of the respondents felt that non-performing loans influence the financial performance practices in the commercial banks. However, Kithinji (2016) analyzed the effect of credit risk management. The study found that the bulk of the profits of commercial banks are not influenced by the volume of credit

and non-performing loans. The implication is that other variables apart from credit and non-performing loans impact on bank's profit.

### **Management Efficiency**

Management efficiency is represented by diverse financial ratios like total asset growth, loan growth rate and earnings growth rate, yet it is one of the complex subject to capture with financial ratios, Chaffey (2016). Operating expenses is another dimension for management quality. The performance of management is expressed qualitatively through subjective assessment of management systems, organisational discipline, control system, quality of staff and others (Ongore and Kusa 2013). The fitness of management to deploy its resources efficiently, income maximisation, reducing operating costs can be measured by financial ratios. Cost efficiency is approximated by a simple ratio of operating expenses to total revenues, denoted as efficiency ratio, which measures management flexibility to fine-tune costs to changes in the business development signaled by revenues. The higher the efficiency ratio, the higher is the default risk (Ongore and Kusa 2013).

Ifecho and Ngalawa (2014) conducted a research on the factor that determines financial performance of commercial banks on the South African banking sector which includes management efficiency. The findings indicated that the considered bank specific factors had a significant impact on the performance of commercial banks.

### **Liquidity Management**

Liquidity is the level to which debts obligations coming due in the next 12 months can be paid in cash or asset that will be converted into cash. According to Rabson and Norman, (2016) adequate level of liquidity is positively associated with bank profitability. However, the study conducted in China and Malaysia found that liquidity level of bank has no relationship with the performance of the banks, Ifeicho and Ngalawa (2014). Initially solvent financial institutions may be driven towards closure by management of short term liquidity. Indicators should cover funding sources and capture large maturity mismatches. The mismatching and controlled mismatching of maturities and interest rate of assets and liabilities is fundamental to the management of commercial banks.

Eric (2017) conducted a research to observe the effects of bank specific factors such as liquidity risk, bank size, capital adequacy, credit risk and operating cost on the profitability of commercial banks in Kenya. The empirical results indicated that the larger the commercial banks the more the profits recorded. Additional results from panel regression indicated that the liquidity was inversely proportional to the commercial banks profitability in the country. However, Vincent (2014) conducted a research on the determinants of financial performance of commercial banks in Kenya. The findings showed that bank specific factors significantly affect the performance of commercial banks in Kenya except for liquidity variable.

### **External Factors**

The macroeconomic policy stability, Gross Domestic Product, Inflation, Interest Rate and Political instability are other factors that affect the performances of banks. For instance, the trend of GDP affects the demands for demand for bank asset. During the declining GDP growth, the demand for credit falls which in turn negatively affects the profitability of banks. On the contrary, in a growing economy as expressed by positive GDP growth, the demand for credit is high due to the nature of the business cycle. During boom the demand for credit is high compared to recession (Leah, 2015). The same author state in relation to the Greek situation that the relationship between inflation level and banks profitability is remained to be debatable. The direction of the relationship is not clear (Anila, 2015).

Rabson and Normam (2016) conducted a research to ascertain whether bank specific factors significantly impact on return on asset as a measure of bank performance. The results indicated that bank specific indicators were not significant in determining bank performance but rather bank external factors could play a significant role in determining bank performance.

First Bank Nigeria is amongst the top 25 best performing banks in Africa. The bank finances its assets with more debt than equity but this does not affect bank's profitability. In 2015, debt to equity ratio (DE) was 6:1 and increases to 7:1 in 2016; return on asset (ROA) was 0.4% and increases to 0.5%, return on equity (ROE) was 2.8% and increases to 3% respectively. As the level of debt increase, financial performance also increases as well as shareholders wealth. This is in agreement with Agent cost theory of capital structure which suggests that due to a continuous dilution

of equity ownership of large corporations, ownership and control become separated and this gives managers an opportunity to pursue their interest instead of that of shareholders thus when the benefit of debt is used as a restriction of managerial discretion. Increasing debt in the capital structure reduces the amount of free cash available to managers and the enjoyment of tax advantages of additional debt against the costs of possible financial distress. First Bank Nigeria has a best optimal capital structure. Zimbabwean banks may consider reviewing business strategy implemented with First Bank Nigeria for best results.

#### **2.4 Chapter Summary**

The chapter covers a range of existing literature on the dimensions of capital structure and bank performance mainly focusing on conceptual review, theoretical review and the empirical review. The following chapter will focus on the methodology used to carry out the research.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

This chapter details the general methodology used to conduct the study. The chapter comprises of the research design, research method, targeted population, sampling, data collection method and data analysis and summary.

#### **3.1 Research Design**

Research design outlines how the research was undertaken. It specifies the methods and procedures that were used to collect and analyze data (Saunders et al 2009). The study adopted panel data and descriptive research design to meet its research objectives. According to Bryman (2015) descriptive technique gives accurate data of persons, events or situations.

A panel data set is one that follows a given sample of individuals overtime and thus provides multiple observations of each individual in the sample (Adeyemi et al 2017). One of the main advantages of panel data is that it enables the researcher to control for unobserved heterogeneity, and secondly since panel data have both cross-sectional and time series dimensions, it provides the researchers with sufficient data points to reduce the likelihood of biasness in the parameter estimators.

#### **3.2 Research Method**

Research methods can be divided into two main types; quantitative and qualitative methods. According to Griffin (2013), qualitative research is concerned with complete and detailed description of events, whereas quantitative research creates statistical models to explain events.

This study applied both quantitative and qualitative approach to analyse the data collected. The objective of quantitative research design is to determine the correlation between an independent variable and dependent or outcome variable in a population. The method is defined as the research technique that is used to quantify data and generalize results from a sample of the population of interest (Griffin 2013).

### **3.3 Target Population**

Population refers to the total collecting of elements about which one wishes to make some inference (Shields 2013) and an element represents each member of the population. The targeted population consists of ten banks in Zimbabwe for the period of 2013-2017. Among the targeted banks, only those that are in finance department will be considered as respondents because they provide valid data on how capital structure affects banking financial performance.

### **3.4 Sampling**

Sampling is a process of selecting a representative group in a total population, Burns and Burns (2012) defines it as a technique of obtaining a sample from a target population which represents the total population. In order to come up with an appropriate research sample that can fully answer the research questions, a judgmental and stratified random sampling techniques were used. Judgmental sampling technique allows the researcher to select certain respondents based on previous knowledge. Stratified random sampling technique which ensures each specific group (strata) is represented accordingly. Sigauke (2013) insinuate that it allocates population units into distinct identifiable groups where individuals or units are then selected from each category (stratum) on a random sampling basis. This technique ensures fair representation of each stratum as respondents from each group have an equal chance of being selected to represent the group. In this case, banks that qualify to be part of the research are those banks that have audited financial statements from 2013 onwards. Banks was put into distinct groups (strata) following their level of debt concentration in the capital structure and then randomly chosen from each level. Respondents from each bank were also chosen based on the researcher's opinion of individual employees who can offer factual and concrete knowledge concerning the type of study consists of eight (8) individual representatives that are two accountants per each banks chosen randomly amongst the targeted ten banks.

### **3.6 Data Collection method and instruments**

This research makes use of both qualitative and quantitative data obtained from primary and secondary sources. Qualitative data was obtained from face to face interviews and quantitative data was obtained from publishes financial statement of

banks from 2013 to 2017. The secondary data was collected solely for conducting a panel regression analysis on the factors that determine bank financial performance in Zimbabwe. The period was chosen because it offers recent time series observations.

### **3.6.1 Primary Data**

Interviews were used to gather up to date data on the impact of capital structure on banks financial performance. Interviews are an important way of gathering raw data because they allow the researcher to ask as many questions as possible thereby allowing the researcher to get more clarity on certain issues. They also give assurance. They also give of immediate response and gives the researcher an opportunity to ask more questions for clarity purposes in case of vague and ambiguous responses. Primary data is data that is collected from original sources and is therefore free from being out dated and manipulation by various users as is with secondary data (Creswell 2013). However, primary data is time consuming and expensive to gather. To mitigate on the pitfalls of primary data, the researcher considered also the use of secondary data.

### **3.6.2 Secondary Data**

This is historical data or data indirectly linked to the current research Murphy (2014) states that secondary data is data which was obtained by other researcher for different reasons from those of the present research study. Secondary data is used to gain initial insight into the research problem; it is cheap compared to primary data, and less time is required in accessing secondary information. The researcher used audited financial statements for the period of 2013-2017.

#### **Advantages of secondary data**

The researcher saved time and costs as tis data was already collected and summarise. It provides a good starting point for research and often helps define the problem and research objectives thus acted as a benchmark and guide for the research. The data gave the researcher the opportunity to examine data from a theoretical perspective. Secondary data is cheaper and faster to access and it provides a way to access the work of other scholars all over the world. Secondary data gave a guide to the researcher to which direction the specific research should go Murphy (2014).



### **Disadvantages of Secondary Data**

Secondary data collected can distort the results of the research. To use secondary data special care is required to amend or modify for the proper use of research. Data can be unreliable as it can be subject to criticism (Bryman 2015). It is not easy to ensure the accuracy of the secondary data and sufficient secondary data may not be always found. If there is a need for present investigation, therefore the secondary data becomes less important. Available secondary data may not suit the purposes of the current study because they have been collected for other reasons.

### **3.7 Model Specification**

The economic model used in the study is given as: bank performance = f (capital structure). Bank performance is measured by the following: Return on Asset (ROA) and Return on Equity (ROE), while capital structure is measured by Debt-equity (DE) and Equity multiplier (EM). From the model by Adeyemi et al (201), the researcher maintains all the variables except age and mathematically the models are expressed as follows.

#### **Model 1**

Return on Asset = f (debt-equity ratio, equity multiplier)

$$ROA = \beta_0 + \beta_1 de + \beta_2 em + \mu_i \dots\dots\dots(1)$$

#### **Model 11**

Return on Equity = f (debt-equity ratio, equity multiplier)

$$ROE = \beta_0 + \beta_1 de + \beta_2 em + \mu_i \dots\dots\dots(2)$$

#### **Where;**

$\beta_0$  = intercept

$\beta_1$ -  $\beta_3$  = Regression coefficient

$\mu_i$  = Stochastic error term

### 3.8 Data Validity and Reliability

Research reliability and validity highly depends on correctness and trustworthiness of research instruments. Instruments are reliable to the extent they provide same results when repeatedly used (Mogere, 2015). The research uses face to face interviews and data from audited financial company reports hence it is reliable since audited financial statements are well known to represent a fair and true view of companies.

### 3.10 Definition of Variables

The formulas were obtained from Fred et al (2008).

**Return On Asset** – It is a ratio of income to its total asset which measures the efficiency of management in utilizing company assets in generating income. It was calculated as follows:

$$\text{ROA} = \frac{\text{Profit after tax}}{\text{Total Asset}}$$

**Return On Equity** – Is a ratio which shows how much profit has been earned in relation to the amount that has been invested by owners of the bank.

$$\text{ROE} = \frac{\text{Profit after tax}}{\text{Equity}}$$

**Debt – Equity ratio** – Is capital structure variable. It is measured as total debt by net worth.

$$\text{DE} = \frac{\text{Total Debt}}{\text{Net worth}}$$

Where net worth = equity share capital + preference share capital + reserve and surplus

**Equity Multiplier** –it is measured as total assets of a firm divided by total equity.

$$\text{EM} = \frac{\text{Total Assets}}{\text{Total Equity}}$$

### **3.11 Model Diagnostic Tests**

#### **Unit root tests**

Generally, prior to regressions, it is a requirement to conduct panel unit root tests. These tests are important in that they will help detect the presence of non-stationary which is a challenge normally found in time series data (Mubeen et al 2016). Thus before proceeding with the identification of possible short and long run relationships, the study verified the order of integration for all variables in the panel. The study employed the Levin, Lin and Chu (LLC) test. The order of integration determines the need for estimating the long run relationship or not. A number of methods for unit root were used which could act as robustness check of data under analysis. The null hypothesis of non-stationary variables should be rejected for the variables to be good for use in the method.

$H_0$ : The panel series is non- stationary

$H_1$ : The panel series is stationary.

The decision rule is if the p-values of the stationary test is less than 5% then reject the null hypothesis of non-stationary and conclude that the panel series are stationary.

#### **Multicollinearity test**

The degree and extent of correlation between the independent variables was ascertained through the use of bi-variate correlation coefficient. This is carried out to check whether there exists a linear relationship in the regressors. The existence of multicollinearity increases type II error as it increases the standard errors and lead to wider confidence intervals.

#### **Autocorrelation**

A test for autocorrelation will also be conducted by computing Durbin Watson (DW) test. According to Brighton (2017) autocorrelation is correlation between members of the series of observation ordered in time (as in time series data) or space (as in cross-sectional data) the DW test statistic is going to be used to test for serial correlation among the explanatory variables. If the DW statistic obtained is approximately equal to two, there is no serial correlation.

$H_0$  there is autocorrelation

$H_1$  there is no autocorrelation

Decision rule: reject null hypothesis if DW is approximately equal to two and conclude that there is no autocorrelation amongst variables.

### **Spurious Regression test**

Comparison of DW test statistic with  $R^2$  helps the researcher to find out if the econometric model suffers from spurious regression. If  $R^2$  is greater than the DW statistic then the model may be spurious (Brighton, 2017).

$H_0$  there is spurious regression

$H_1$  there is no spurious regression

Decision rule: reject null hypothesis if  $R^2$  is less than DW and conclude that the model does not suffer from a spurious regression.

### **Hausman Specification test**

It is a statistical hypothesis test which evaluates consistency of an estimator when compared to alternative. This test is performed when using panel data only. In panel data we have Random Effects and Fixed Effects estimates model to calculate panel data. The Hausman test, tests which model between the two is most significant by analyzing the  $R^2$  values to see which model is more related to explain the panel data. it helps researchers evaluate if a statistical model corresponds to data.

$H_0$  Random Effects model is significant

$H_1$  Random Effects model is not significant

The decision rule is if the p-values of the Hausman test is less than 5% then reject the null hypothesis of Random Effect and conclude that the Fixed Effect model is the best to adopt.

### **3.12 Model Goodness of Fit**

#### **R-squared and Adjusted R-squared**

According to Gujarati (2004),  $R^2$  is the coefficient of determination. R-squared is a statistical measure of how close the data are to the fitted regression line. It is used to measure the goodness of fit. It can also be referred to as a summary measure which shows how well the sample regression line fits the data. R-squared is the percentage of the responsible variable that is explained by a linear model. It should always be between 0% and 100%.

Hence 0% indicates that the model explains none of the variability of the response data around and 100% indices that the model explains all the variability of the response data around the mean. In general the higher the R-squared, the better the model fits the data. Adjusted R-squared is a slightly modified version of fit of the regression, designed to penalize for the excess number of regressors which do not add to the explanatory power of the regression. The recommended minimum of  $R^2$  is 0.6 - 1.50.

### **3.13 Data Presentation and Analysis**

A variety of both qualitative and quantitative techniques of data presentation such as cross tabulations and graphs will be used to clearly present data so as to come up with summarized information which aids quick viewing and interpretation of data. The researcher adopted an econometric method to analyse the extent of relationship between the explanatory variables and the depended variables in a regression analysis by making use of Eviews7 software package. The model used Return on Asset (ROA), Return on Equity (ROE) as dependent variables against independent variables, Debt to Equity (DE) and Equity Multiplier (EM). The researcher chose this statistical package because it is fast and user friendly and has other parameters which cannot be found in other packages.

In panel data analysis, many authors used only pooled ordinary least square (OLS) estimation model, (Eviews7 software package). But the problem with this model is its failure to control for time invariant firm specific heterogeneity for instance unobserved fixed effect. Therefore, the model may produce partial and biased results. On the other hand, fixed effects model has also limitation as it assumes that each cross-section's interception does not vary across time. The package needs thirty

observations for it to be considered a large sample. Since each of the pooling models has limitations, it would not be correct to use only one model. However, in this study pooling effects model, fixed effects model and random effects model will be used. Bokhtiar et al (2014), Enard and Chipo (2015), Mubeen et al (2014), Seyeden (2015) has also used Eviews7 package and also confirm these results about the package

### **3.14 Ethical Considerations**

The researcher respected the organizational ethics, policies and procedures, on the other hand taking into consideration how the employees might feel about the potential effects and results of the research (Saunders, 2009). Asking for permission from the top management was one of the ethical considerations applied.

### **3.15 Chapter Summary**

The objective of this chapter was on highlighting the techniques in which the study was carried out. This chapter describes the research methodology with the designs employed, as well as identifying research area and estimation techniques. The chapter illustrates how the data was gathered and analysis technique which includes model specifications and the test on the data. Chapter Three hence leads to the next chapter that presents the research findings.

## CHAPTER FOUR

### DATA ANALYSIS RESULTS AND DISCUSSION

#### 4.0 Introduction

The chapter explains more on research findings, analysis of data gathered, presentation techniques, interpretation and discussions developed under this study. The research objectives given in the previous chapters were used as aid in concluding evaluations and discussions of the chapter. The chapter presents summary statistics, results of relevant test undertaken and final results used to conclude the study.

#### 4.1: Interview Response Rate

Out of the eight interviewees that were targeted by the researcher, seven responded and the seven interviews were carried out giving a response rate of 87.7%.

##### 4.1.1: In what ways does capital structure affect bank's financial performance?

Majority of the interviewees pointed out that as debt continue to be added in the capital structure, the bank financial performance decreases, only a minority said if more debt is induced in the capital structure it positively influences the bank financial performance. The researcher observed that too much debt in the capital structure negatively affects bank's financial performance. This fact is also revealed in the regression analysis (table 4.6 and 4.7) that debt-equity negatively affects bank's financial performance. The results also revealed that equity-multiplier have a weak positive influence on financial performance.

##### 4.1.2: What kind of relationship does debt and equity have?

Some of the respondents said that debt has a negative relationship with equity in that when debt increases, the average total return on shareholder's funds to assets and the return on shareholder's funds decreases, only a quarter said there is no relationship between debt and equity. The researcher observed that there is a negative relationship between debt and equity. This fact is also revealed in the regression analysis that debt-equity have a negative relationship with ROA and ROE

#### **4.1.3: What determines a capital structure of a bank?**

The interviewees explained that the size of a bank is positively related to its level of debt. Additional arguments in favor of this proposition are that, more resistant to shocks in the long run and they are often listed on stock exchanges and more transparent which results in lower agency costs. The respondents also pointed profitability and growth as one of the factors that determines capital of a bank. In explaining they said that as profitability grows the cost of potential bankruptcy is reduced and that the chance of reducing the tax base by subtracting the cost of interest motivates a bank to issue debt. The desire for faster growth at a constant level of profitability necessitates the use of more debt. Asset tangibility is also one of the factors which was said to determine capital structure of a bank. The respondents said if a bank have more tangible assets which it can easily convert into cash, it can increase its debt ratio since it can service the debt through its tangible assets in the event of liquidation. One of the respondents mentioned that more debt will be used by a bank that has more tangible assets to serve as collateral. The responses corroborate with works of Mutenheri and Munangagwa (2015), Muller (2015) and Onaolapo et al (2015).

#### **4.1.4: What are the other factors that have potential to influence bank's financial performance?**

The interviewees mentioned that internal factors like the CAMELs among others have potential to influence bank financial performance since these factors are influenced by the internal decisions of management and the board and they differ from bank to bank. One of the respondents explains by giving an example on management efficient. He said that the higher the operating profits to total income the more the efficient management is in terms of operational efficiency and income generation, management quality in this regard, determines the level of operating expenses and in turn affects profitability. The respondents also said that there are external factors that influences bank's performance and those include macroeconomic policy stability, Gross Domestic Product, inflation, interest rate and political instability. The responses corroborate with works of Muluaalem (2015), Olweny and Shipho (2015), Odongo (2014) and Mutua (2014).



## Regression Analysis

The estimated regression for the impact of capital structure on bank financial performance is reported in table 4.1.

## 4.2: Descriptive Results

**Table 4.2: Summary Statistics Results**

	ROE	ROA	DE	EM
Mean	0.447940	0.038826	7.884400	8.147000
Median	0.110000	0.016050	5.905000	6.785000
Maximum	0.184600	0.050000	18.10000	19.23000
Minimum	-0.130000	-0.027000	3.330000	1.080000
Std. Dev.	1.802388	0.102624	4.487297	4.915484

*Source: Researchers' own computations with Eviews 7.0*

Table 4.2 shows the average value of the performance ratios measured by ROE and ROA, sample Zimbabwe banking industry is 44.8 percent and 3.9 percent with a maximum and minimum value of 0.18, 0.05 and -0.027 and -0.13 respectively. The results indicated that on average, for every \$1 worth of total assets of the banks, mere 4 cents was earned as profit after tax, while 45 cents was earned after tax profit on every \$1 equity share issued. The above analysis shows that the selected banks have low accounting performance during the period of study.

On the other hand, the debt-equity value of sample banks which was measured by total debt over shareholder's equity is 788 percent with the maximum and minimum value of 18.1 and 3.3 respectively. The standard deviation is 4.48297. This indicates that more than 448% of the total assets are finance with debt. The mean of equity multiplier ratio is 5.67.

### 4.3 Static Models Diagnostics Results

#### 4.3.1 Panel Unit Root Test

The study performed different methods of stationarity test for panel data to each variable that was included in the regressions. Different methods of panel stationarity test methods were utilized to account for the varying characteristics exhibited by each method. For example, the PP-Fisher is able to execute an unbalanced panel as compared to other methods which can only perform the test on strongly balanced panel.

**Table 4.3 Summary of Panel Unit-Root Test (In Levels)**

<b>Variable</b>	<b>Levin-Lin-Chu (p-values)</b>	<b>Im-Pesaran-Shin (p-values)</b>	<b>ADF Fisher (p-values)</b>	<b>PP-Fisher:chi-squared (p-values)</b>
ROE	0.0000	0.0000	0.0049	0.0177
ROA	0.0000	0.0000	0.0003	0.0330
DE	0.0000	0.0000	0.0018	0.0001
EM	0.0000	0.0000	0.0000	0.0000

*Source: Researchers' own computations with Eviews 7.0*

As shown in table 4.2, the null hypothesis of non-stationary variables was strongly rejected by the Levin-Lin-Chu, ADF Fisher, Im-Pesaran-Shin and PP-Fisher unit-root test. As such, the variables are good to be used in the model

#### 4.3.2 Multicollinearity Test

The tables below (table 4.3 and 4.4) summarise the results of correlation analysis among the variables. This exercise serves two important purposes. First is to determine whether there are bivariate relationship between each pair of the depended and independent variables. The second is to ensure that the correlations among the explanatory variables are not so high to the extent of posing multicollinearity problems.

**Table 4.4 Correlation Analysis (Pearson) ROE as a dependent variable**

	ROE	DE	EM
ROE	1.000000		
DE	-0.109768	1.000000	
EM	0.280320	0.715447	1.000000

*Source: Researchers' own computations with Eviews 7.0*

From the above results, there is no multicollieniarity for return on equity, debt-equity and equity multiplier as the correlation matrix shows no value that is greater than 0.8. The results shows that ROE is negatively correlated with debt-equity ratio and positively correlated with equity multiplier and the coefficient estimates of correlation are -0.109768 and 0.280320 respectively.

**Table 4.5 Correlation Analysis (Pearson) ROA as a dependent variable**

	ROA	DE	EM
ROA	1.000000		
DE	-0.149768	1.000000	
EM	0.223954	0.715447	1.000000

*Source: Researchers' own computations with Eviews 7.0*

From the above results, there is no multicollieniarity for return on equity, debt-equity and equity multiplier as the correlation matrix shows no value that is greater than 0.8. The results shows that ROA is negatively correlated with debt-equity ratio and positively correlated with equity multiplier and the coefficient estimates of correlation are -0.149768 and 0.223954 respectively..

### **4.3.3 Normality test**

#### **Error term normality test**

Upon testing the error term for normal distribution, the probability value is greater than 5% as which is quite high and significant in explaining the depended variable. Data is said to be normally distributed when the probability is greater than 0.05.

#### 4.3.4: Auto-correlation test

Upon testing for auto-correlation, Durbin Watson for both return on asset (1.738017) and return on equity (1.648566) is close to 2. Therefore, null hypothesis is rejected and conclude that there is no first order autocorrelation, either positive or negative.

#### 4.3.5: Spurious Regression Test

R-squared for return on equity is 0.409060 and for return on asset is 0.403790 which is less than Durbin Watson of 1.648566 and 1.738017 respectively. Therefore null hypothesis is rejected and conclude that there is no spurious regression.

#### 4.3.6 Hausman Test Results

**Table 4.6 Summary of Hausman Test Results**

Dependent Variable	Hausman Test
ROE	chi2(6) = 5.8279 P-value = 0.0443
ROA	chi2(6) = 6.5556 P-value = 0.0377

*Source: Researchers' own computations with Eviews 7.0*

Table 4.5 shows that the null hypothesis of random effects is rejected for both models. In the random effects model, the intercept is assumed to be random drawing from a much larger population with a constant mean value. The implication of this statement is that random effect model is used when the sample is so large and data is selected randomly to represent the analysis. As this research uses data from ten banks, therefore the fixed model is used as a representative model.

## 4.4 Regression Results Presentation

### 4.4.1 Static Models Results

The results for the fixed effects models are as presented in this section.

**Table 4.7 Summary of Fixed Model Results with ROE as Dependent Variable**

Variables	Coefficient	Std. Error	t-Statistic	Prob.
DE	-0.357624	0.091202	-3.921219	0.0004
EM	0.284478	0.095927	2.965579	0.0052
Constant	0.949949	0.615359	1.543732	0.1309
Observations	50			
Number of banks	10			

*Source: Researchers' own computations with Eviews 7.0*

**Table 4.8 Summary of Fixed Model Results with ROA as Dependent Variable**

Variables	Coefficient	Std. Error	t-Statistic	Prob.
DE	0.073285	0.035193	2.082384	0.0441
EM	-0.021444	0.005216	-4.111188	0.0002
Constant	0.016523	0.005486	3.011748	0.0046
Observations	50			
Number of banks	10			

*Source: Researchers' own computations with Eviews 7.0*

**The models then take the form:**

$$\text{ROA} = 0.0732851652503 - 0.0214437077104 \cdot \text{DE} + 0.0165228432333 \cdot \text{EM} + [\text{CX}=\text{F}]$$

$$\text{ROE} = 0.949949101827 - 0.357624070366 \cdot \text{DE} + 0.284477981904 \cdot \text{EM} + [\text{CX}=\text{F}]$$

Table 4.6 and 4.7 shows that capital structure measured by debt-equity ratio has negative influence on bank performance by ROA and ROE. Furthermore, results reveals that debt-equity ratio ( $\beta = -0.0214$ ) and ( $\beta = -0.3576$ ) has negative impact on bank financial performance. This implies that the higher the debit-equity ratio, the lower the bank's financial performance. Thus, a \$1 increase in debt-equity will result

in 2.1% and 36% decrease in ROA and ROE respectively, hence showing a negative relationship between capital structure and bank financial performance.

This finding is in support of pecking order theory which claims a negative relationship between capital structure and firm performance. This study also corroborate with work of Lawal et al, (2014), Onaolapo and Kajola (2010) and Akinlo (2014) that there is negative relationship between capital structure and firm performance. however, the result of this study contradict the findings of Patrick et al., (2015), Olokoyo (2014) Aburub (2016) and San and Heng (2014) who claimed that capital structure has positive relationship with firm performance.

Capital structure measured by equity multiplier ratio has a positive influence on bank performance measured by ROA and ROE. The result reveals that equity multiplier ratio ( $\beta = 0.0165$ ) and ( $\beta = 0.2845$ ) have a weak positive impact on bank financial performance. Thus, a \$1 increase in equity multiplier will result in 2% and 29% increase in ROA and ROE respectively. The finding on this study is similar with previous findings of Nirajini and Priya (2014), Akeem et al (2014), and Nikoo (2015).

Hypothesis (**H<sub>0</sub>**) which states that capital structure has significant impact on bank's financial performance is accepted and concludes that capital structure has a significant impact on financial performance.

**H<sub>1</sub>** "there is positive relationship between capital structure and bank financial performance." Was considered and tested for its validity. Based on the on the above evidence gathered, the **H<sub>1</sub>** was rejected because the results shows a relationship between capital structure and firm performance.

**H<sub>2</sub>** "there is negative relationship between capital structure and bank financial performance." After the rejection of **H<sub>1</sub>**, the **H<sub>2</sub>** hypothesis was tested for its validity. **H<sub>2</sub>** was accepted based on the above evidence gathered.

#### **4.6 Chapter Summary**

This chapter served to present and analyze collected data to answer the research study questions and objectives. The investigation was as success as the relationship and the impact of capital structure on banking performance was found, an adverse relationship between capital structure and bank performance exists and that debt-equity negatively

influences bank's financial performance. The Eviews7 package was used to compute the results.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.0 Introduction

This chapter gives a summary of major findings, a detailed conclusion of this research and some policy lessons drawn from the results of the previous chapter as well as recommendations thereto. Possible areas of future research are also given.

#### 5.1 Summary of Major Findings and Conclusion

The main objective of this study was to establish the impact of capital structure on bank's financial performance in Zimbabwe. To achieve the objective, the researcher sampled both listed and non-listed banks that exhibited the characteristics for the study. Both primary and secondary data was used in this study. Data was collected by the review of documents, annual reports of the sampled banks published books of accounts and interviews.

#### Major findings

##### To establish the impact of capital structure on bank financial performance

The researcher found out that capital structure measured by debt-equity ratio has negative influence on bank performance by ROA and ROE. Furthermore, results reveals that debt-equity ratio ( $\beta = -0.0214$ ) and ( $\beta = -0.3576$ ) has negative impact on bank financial performance. This implies that the higher the debit-equity ratio, the lower the bank's financial performance. Capital structure measured by equity multiplier ratio has a weak positive influence on bank performance measured by ROA and ROE. The result reveals that equity multiplier ratio ( $\beta = 0.0165$ ) and ( $\beta = 0.2845$ ) have positive impact on bank financial performance.



**To identify the inter relationship between capital structure and bank performance.**

The researcher found out that ROE and ROA is negatively correlated with debt-equity ratio and positively correlated with equity multiplier and the coefficient estimates of correlation are -0.109768, -0.149768 and 0.280320, 0.223954 respectively. The findings supports pecking order theory which claims that capital structure has a negative relationship with firm performance.

**To determine the determinants of capital structure for Zimbabwean banks**

The researcher found out that firm size, asset tangibility, profitability and growth are factors that determine capital structure and must be taken into account at the time of deciding and selecting a capital structure.

**To investigate other factors that may have potential to influence financial performance of the bank.**

The researcher found out that there are internal and external factors that may have potential to influence bank financial performance. Internal factors are influenced by internal decisions of management and the board and external factors are country wide factors which are beyond the control of a bank.

**Conclusion**

From the study findings it would be safe to conclude that debt-equity ratio had an inverse relationship with return on asset and on return on equity. Capital structure theory as attributed to Modigliani and Miller concluded that it doesn't matter how a firm finances its operations and that the value of a firm is independent of its capital structure making capital structure irrelevant.

The conclusion is supported by the results of the interviews conducted and the regression analysis that the higher the debt of a bank, the lower the bank financial performance therefore showed the need to increase more capital injection rather than borrowing as supported by Jensen and Meckling (1976) to them the benefits of debt financing are less than its negative aspects, so firms will always prefer to fund investments by internal sources.

Based on the empirical literatures and findings the study concludes that there is significant impact of capital structure on bank performance. Although banks generally depend on the debt capital therefore financial analyst and managers should be cautious while using debt as a source of finance, since there exist a negative relationship between capital structure and bank financial performance. The managers must give an attempt to finance their activities and behaviors with retained earnings and employ debt as a final alternative. Consequently, this study suggests that financial analyst and managers should emphasize on optimal level of capital structure decision and efficient utilization and allocation of resources to achieve the targeted level of productive efficiency in the banking sector of Zimbabwe.

The research was very successful and all objectives of the study were achieved and all sub research questions were answered.

## **5.2 Policy Recommendations**

It was considered to be very important when finance directors and managing directors are trying to fund the bank's assets and to understand the impact of capital structure on their financial performance as well as cost of funds. It was evident from the study and analysis arising thereof. This study established that capital analysis and asset structure analysis was a very important analysis used to boost bank's competitive advantage and consequently profitability. In addition the capital market analyst as well as investment analyst should advise the investors as well as banks on the optimal capital structure based on capital structure analysis.

Borrowing introduces a risk to the financial institution and on the return to shareholders in terms of reducing the amount of profits available to them as well as exposing their assets to dissolution in the event of failing to repay the debt in the stipulated time. When a business's returns are likely to fluctuate greatly the use of increased debt magnifies the risk. Adequate emphasis must be placed on enabling such financial institutions to employ more shareholders' funding than debt and reduce the risk that is inherent in the increased use of debt. Based on the results of the study the following recommendations were made.

## **5.3 Recommendations**

### **5.3.1 Use equity rather than borrowing**

The conclusion that borrowing does not always improve bank's performance leads to the recommendation that banks should use shareholders' funds as much as possible before they undertake to borrow, so that they minimize the risk related to borrowing, which include interest on the debt exceeding the return on the assets they are financing. Banks must therefore be encouraged or assisted to obtain equity by listing on the exchanges. This can be done by educating and sensitization of business owners of the benefits of listing, as well as granting of special fiscal measures to encourage them to list. Previous writers such as Maina and Kadongo (2013), Adekunle (2016), Abudul (2015) amongst others contented that banks which uses equity rather than borrowings are more profitable than those banks which finance their asserts with more of debt.

### **5.3.2 Consider the leverage risk leverage chance of the asset to be financed**

When a firm has exhausted its shareholders funding and chooses to finance its expansion of operations by borrowing, special consideration must be taken to ensure that the assets financed by borrowed funds bring in a higher return than the interest the firm is required to pay on the debt. If this is not done, the bank will erode the reserves in order to pay the debt as the assets financed will not be making enough returns to cover the debt. The bank must select source of funding carefully to avoid falling into the leverage risk trap. Memba and Nyamumba (2014) supports that financial decisions result in a given capital structure and suboptimal financing decisions can drastically yield corporate failure.

### **5.3.3 Encourage banks to list**

The increase in debt has been found to reduce performance over time and increase the risks to the business owners. The capital market authorities and the exchanges should increase education of the business community in the advantages of listing over borrowing. In Zimbabwe there is a large proportion of banks but very few of these are listed on the Zimbabwe stock exchange. Javed and Akhtar (2016) supported that if the bank is listed on a stock market it enjoys more benefits than those banks whose equity are not sold on the stock market.

#### **5.4 Limitations of the study**

The main limitations of the study include;

- This study only focuses on one sector (the banking sector) so it cannot signify the overall sectors of transition economy. However there are many other sectors in Zimbabwe, therefore the results are limited to the selected sample only and not cover the other sectors.
- Secondly, the time period for the study includes only five year data. In order to get more accurate and defined results, the long time series data should be collected.

#### **5.5 Suggestions for Further Studies**

This study focuses only on the banking sector in Zimbabwe; it is suggested to conduct further researches based on the data obtained from all sectors of the economy. This may provide more evidence on the impact of capital structure on financial performances. The use of market based performances such as the Tobin's Q, price earnings, market value to book value of equity, among others, will make the study more robust. Attention should also be shifted to the study of small and medium scale firms in Zimbabwe.

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## **APPENDICIES**

### **APPENDIX: 1**

Commercial Banks included

1. Agribank Zimbabwe
2. Barclays Bank of Zimbabwe
3. CABZ Bank limited
4. CBZ Bank limited
5. FBC Bank Limited
6. NMB Bank Limited
7. POSB Zimbabwe
8. Stanbic Zimbabwe Limited
9. Standard chartered bank Zimbabwe
10. ZB Bank Limited

Source: Reserve Bank Zimbabwe (2013)

**APPENDIX 2 :**

<b>Bank</b>	<b>Year</b>	<b>ROA</b>	<b>ROE</b>	<b>DE</b>	<b>EM</b>
<b>BARCLAYS</b>	<b>2013</b>	<b>0.067</b>	<b>0.001</b>	<b>5.94</b>	<b>6.94</b>
<b>BARCLAYS</b>	<b>2014</b>	<b>0.023</b>	<b>0.13</b>	<b>4.9</b>	<b>5.94</b>
<b>BARCLAYS</b>	<b>2015</b>	<b>0.013</b>	<b>0.07</b>	<b>4.5</b>	<b>5.52</b>
<b>BARCLAYS</b>	<b>2016</b>	<b>0.022</b>	<b>0.17</b>	<b>6.5</b>	<b>7.3</b>
<b>BARCLAYS</b>	<b>2017</b>	<b>0.03</b>	<b>-0.001</b>	<b>16.17</b>	<b>17.17</b>
<b>CBZ</b>	<b>2013</b>	<b>0.18</b>	<b>0.024</b>	<b>6.57</b>	<b>7.57</b>
<b>CBZ</b>	<b>2014</b>	<b>0.023</b>	<b>0.15</b>	<b>6.2</b>	<b>7.2</b>
<b>CBZ</b>	<b>2015</b>	<b>0.022</b>	<b>0.143</b>	<b>6.5</b>	<b>7.53</b>
<b>CBZ</b>	<b>2016</b>	<b>0.014</b>	<b>0.087</b>	<b>6.3</b>	<b>7.37</b>
<b>CBZ</b>	<b>2017</b>	<b>0.09</b>	<b>0.012</b>	<b>6.08</b>	<b>7.08</b>
<b>FBC</b>	<b>2013</b>	<b>0.13</b>	<b>0.03</b>	<b>3.33</b>	<b>3.83</b>
<b>FBC</b>	<b>2014</b>	<b>0.01</b>	<b>0.06</b>	<b>4.4</b>	<b>5.41</b>
<b>FBC</b>	<b>2015</b>	<b>0.038</b>	<b>0.17</b>	<b>3.7</b>	<b>4.67</b>
<b>FBC</b>	<b>2016</b>	<b>0.04</b>	<b>0.18</b>	<b>3.9</b>	<b>4.93</b>
<b>FBC</b>	<b>2017</b>	<b>0.16</b>	<b>0.03</b>	<b>3.93</b>	<b>4.93</b>
<b>NMB</b>	<b>2013</b>	<b>0.08</b>	<b>-0.01</b>	<b>4.97</b>	<b>5.97</b>
<b>NMB</b>	<b>2014</b>	<b>0.0058</b>	<b>0.04</b>	<b>5.3</b>	<b>6.35</b>
<b>NMB</b>	<b>2015</b>	<b>0.0164</b>	<b>0.11</b>	<b>5.6</b>	<b>6.6</b>
<b>NMB</b>	<b>2016</b>	<b>0.0157</b>	<b>0.09</b>	<b>4.8</b>	<b>5.77</b>
<b>NMB</b>	<b>2017</b>	<b>0.06</b>	<b>0.012</b>	<b>4.71</b>	<b>5.71</b>
<b>ZB</b>	<b>2013</b>	<b>0.013</b>	<b>0.001</b>	<b>3.94</b>	<b>4.93</b>
<b>ZB</b>	<b>2014</b>	<b>-0.027</b>	<b>-0.13</b>	<b>4.5</b>	<b>1.39</b>
<b>ZB</b>	<b>2015</b>	<b>0.02</b>	<b>0.126</b>	<b>4.3</b>	<b>1.32</b>
<b>ZB</b>	<b>2016</b>	<b>0.03</b>	<b>0.134</b>	<b>4.1</b>	<b>1.29</b>
<b>ZB</b>	<b>2017</b>	<b>0.09</b>	<b>0.02</b>	<b>3.57</b>	<b>4.57</b>
<b>CABZ</b>	<b>2013</b>	<b>0.16</b>	<b>0.029</b>	<b>4.39</b>	<b>5.39</b>
<b>CABZ</b>	<b>2014</b>	<b>0.027</b>	<b>0.17</b>	<b>5.2</b>	<b>6.23</b>
<b>CABZ</b>	<b>2015</b>	<b>0.015</b>	<b>0.1</b>	<b>5.8</b>	<b>6.81</b>
<b>CABZ</b>	<b>2016</b>	<b>0.29</b>	<b>0.18</b>	<b>5.1</b>	<b>6.09</b>
<b>CABZ</b>	<b>2017</b>	<b>0.22</b>	<b>0.03</b>	<b>5.71</b>	<b>6.71</b>

<b>AGRIBANK</b>	<b>2013</b>	<b>0.12</b>	<b>0.068</b>	<b>16.8</b>	<b>17.8</b>
<b>AGRIBANK</b>	<b>2014</b>	<b>0.0053</b>	<b>0.102</b>	<b>17.6</b>	<b>19.2</b>
<b>AGRIBANK</b>	<b>2015</b>	<b>0.0051</b>	<b>0.095</b>	<b>18.1</b>	<b>19.23</b>
<b>AGRIBANK</b>	<b>2016</b>	<b>0.0064</b>	<b>0.117</b>	<b>18.1</b>	<b>18.69</b>
<b>AGRIBANK</b>	<b>2017</b>	<b>0.093</b>	<b>0.0051</b>	<b>17.4</b>	<b>18.4</b>
<b>POSB</b>	<b>2013</b>	<b>0.08</b>	<b>0.008</b>	<b>9.67</b>	<b>10.67</b>
<b>POSB</b>	<b>2014</b>	<b>0.01</b>	<b>0.11</b>	<b>10.62</b>	<b>11.69</b>
<b>POSB</b>	<b>2015</b>	<b>0.009</b>	<b>0.112</b>	<b>10.28</b>	<b>11.34</b>
<b>POSB</b>	<b>2016</b>	<b>0.009</b>	<b>0.1</b>	<b>9.74</b>	<b>10.79</b>
<b>POSB</b>	<b>2017</b>	<b>0.094</b>	<b>0.09</b>	<b>9.86</b>	<b>10.91</b>
<b>STANBIC</b>	<b>2013</b>	<b>0.28</b>	<b>0.039</b>	<b>6.19</b>	<b>7.19</b>
<b>STANBIC</b>	<b>2014</b>	<b>0.037</b>	<b>0.25</b>	<b>5.87</b>	<b>6.87</b>
<b>STANBIC</b>	<b>2015</b>	<b>0.04</b>	<b>0.27</b>	<b>5.76</b>	<b>6.76</b>
<b>STANBIC</b>	<b>2016</b>	<b>0.05</b>	<b>0.29</b>	<b>5.3</b>	<b>6.3</b>
<b>STANBIC</b>	<b>2017</b>	<b>0.08</b>	<b>0.009</b>	<b>7.39</b>	<b>8.39</b>
<b>STANCHART</b>	<b>2013</b>	<b>0.09</b>	<b>0.006</b>	<b>13.4</b>	<b>14.4</b>
<b>STANCHART</b>	<b>2014</b>	<b>0.03</b>	<b>0.078</b>	<b>14.93</b>	<b>15.53</b>
<b>STANCHART</b>	<b>2015</b>	<b>0.007</b>	<b>0.093</b>	<b>12.2</b>	<b>1.08</b>
<b>STANCHART</b>	<b>2016</b>	<b>0.0025</b>	<b>0.033</b>	<b>12.29</b>	<b>1.08</b>
<b>STANCHART</b>	<b>2017</b>	<b>0.035</b>	<b>0.009</b>	<b>11.81</b>	<b>12.81</b>

### APPENDIX 3

Panel unit root test: Summary

Series: ROE

Date: 04/17/18 Time: 15:00

Sample: 2013 2017

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0

Newey-West automatic bandwidth selection and Bartlett kernel

Balanced observations for each test

---

---

Method	Statistic	Prob.**	Cross- sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-441.825	0.0000	10	40
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-				
stat	-82.1959	0.0000	10	40
ADF - Fisher Chi-square	40.0519	0.0049	10	40
PP - Fisher Chi-square	35.4879	0.0177	10	40

---

---

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary

Series: ROA

Date: 04/17/18 Time: 15:01

Sample: 2013 2017

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0

Newey-West automatic bandwidth selection and Bartlett kernel

Balanced observations for each test

---

---

Method	Statistic	Prob.**	Cross- sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-675.484	0.0000	10	40
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-				
stat	-171.303	0.0000	10	40
ADF - Fisher Chi-square	49.4710	0.0003	10	40
PP - Fisher Chi-square	33.0903	0.0330	10	40

---

---

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary

Series: DE

Date: 04/17/18 Time: 15:02

Sample: 2013 2017

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0

Newey-West automatic bandwidth selection and Bartlett kernel

Balanced observations for each test

---

---

Method	Statistic	Prob.**	Cross- sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-26.5595	0.0000	10	40

---

---

Null: Unit root (assumes individual unit root process)

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Im, Pesaran and Shin W-

stat	-5.36433	0.0000	10	40
ADF - Fisher Chi-square	43.3977	0.0018	10	40
PP - Fisher Chi-square	51.2795	0.0001	10	40

---

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi

-square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary

Series: EM

Date: 04/17/18 Time: 15:03

Sample: 2013 2017

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0

Newey-West automatic bandwidth selection and Bartlett kernel

Balanced observations for each test

---

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-26.4720	0.0000	10	40

---

Null: Unit root (assumes individual unit root process)

---

Im, Pesaran and Shin W-

stat	-9.38061	0.0000	10	40
ADF - Fisher Chi-square	56.5571	0.0000	10	40
PP - Fisher Chi-square	54.5434	0.0000	10	40

---

\*\* Probabilities for Fisher tests are computed using an asymptotic Chi  
-square distribution. All other tests assume asymptotic  
normality.



## APPENDIX 4

### HASMAN TESTS

#### ROE

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

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---

	Chi-Sq.		
Test Summary	Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.827896	2	0.0443

---

---

\*\* WARNING: estimated cross-section random effects variance is zero.

Cross-section random effects test comparisons:

---

---

Variable	Fixed	Random	Var(Diff.)	Prob.
DE	-0.357624	-0.255349	0.003178	0.0696
EM	0.284478	0.269561	0.004919	0.8316

---

---

Cross-section random effects test equation:

Dependent Variable: ROE

Method: Panel Least Squares

Date: 04/17/18 Time: 20:26

Sample: 2013 2017

Periods included: 5

Cross-sections included: 10

Total panel (balanced) observations: 50

---

---

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.949949	0.615359	1.543732	0.1309
DE	-0.357624	0.091202	-3.921219	0.0004

---

---

EM	0.284478	0.095927	2.965579	0.0052
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Effects Specification

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Cross-section fixed (dummy variables)

R-squared	0.409060	Mean dependent var	0.447940
Adjusted R-squared	0.237998	S.D. dependent var	1.802388
S.E. of regression	1.573353	Akaike info criterion	3.949858
Sum squared resid	94.06669	Schwarz criterion	4.408744
Log likelihood	-86.74645	Hannan-Quinn criter.	4.124604
F-statistic	2.391303	Durbin-Watson stat	1.648566
Prob(F-statistic)	0.022922		

## ROA

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

	Chi-Sq.		
Test Summary	Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	6.555545	2	0.0377

\*\* WARNING: estimated cross-section random effects variance is zero.

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
DE	-0.021444	-0.014524	0.000010	0.0318
EM	0.016523	0.014161	0.000016	0.5560

Cross-section random effects test equation:

Dependent Variable: ROA

Method: Panel Least Squares

Date: 04/17/18 Time: 21:03

Sample: 2013 2017

Periods included: 5

Cross-sections included: 10

Total panel (balanced) observations: 50

---

---

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.073285	0.035193	2.082384	0.0441
DE	-0.021444	0.005216	-4.111188	0.0002
EM	0.016523	0.005486	3.011748	0.0046

---

---

Effects Specification

---

---

Cross-section fixed (dummy variables)

---

---

R-squared	0.403790	Mean dependent var	0.038826
Adjusted R-squared	0.231203	S.D. dependent var	0.102624
S.E. of regression	0.089981	Akaike info criterion	-1.772863
Sum squared resid	0.307673	Schwarz criterion	-1.313977
Log likelihood	56.32157	Hannan-Quinn criter.	-1.598116
F-statistic	2.339630	Durbin-Watson stat	1.738017
Prob(F-statistic)	0.025806		

---

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## APPENDIX 5

### RESULTS: ROE

Dependent Variable: ROE

Method: Panel Least Squares

Date: 04/18/18 Time: 21:44

Sample: 2013 2017

Periods included: 5

Cross-sections included: 10

Total panel (balanced) observations: 50

---

---

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.949949	0.615359	1.543732	0.1309
DE	-0.357624	0.091202	-3.921219	0.0004
EM	0.284478	0.095927	2.965579	0.0052

---

---

#### Effects Specification

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---

Cross-section fixed (dummy variables)

---

---

R-squared	0.409060	Mean dependent var	0.447940
Adjusted R-squared	0.237998	S.D. dependent var	1.802388
S.E. of regression	1.573353	Akaike info criterion	3.949858
Sum squared resid	94.06669	Schwarz criterion	4.408744
Log likelihood	-86.74645	Hannan-Quinn criter.	4.124604
F-statistic	2.391303	Durbin-Watson stat	1.648566
Prob(F-statistic)	0.022922		

---

---

### RESULTS: ROA

Dependent Variable: ROA

Method: Panel Least Squares

Date: 04/18/18 Time: 21:53

Sample: 2013 2017

Periods included: 5

Cross-sections included: 10

Total panel (balanced) observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.073285	0.035193	2.082384	0.0441
DE	-0.021444	0.005216	-4.111188	0.0002
EM	0.016523	0.005486	3.011748	0.0046

#### Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.403790	Mean dependent var	0.038826
Adjusted R-squared	0.231203	S.D. dependent var	0.102624
S.E. of regression	0.089981	Akaike info criterion	-1.772863
Sum squared resid	0.307673	Schwarz criterion	-1.313977
Log likelihood	56.32157	Hannan-Quinn criter.	-1.598116
F-statistic	2.339630	Durbin-Watson stat	1.738017
Prob(F-statistic)	0.025806		

## APPENDIX: 6

### RESEARCH PROJECT INTERVIEW GUIDE

#### Questions

1. In what ways does capital structure affect bank's financial performance?
2. What kind of relationship does debt and equity have?
3. What determines a capital structure of a bank?
4. What are the other factors that have potential to influence bank's financial performance?

**Appendix 7**

Midlands State University

Faculty of Commerce

P Bag 9055

Gweru

05 April 2018

CBZ Holdings Zimbabwe

60 Kwame Nkrumah

Harare

Dear Sir/ Madam

**RE: Request for permission to conduct research at CBZ bank in respect of Perditah Machingaifa**

I am a final year student with the above university, pursuing a Bachelor of Commerce (Honors) Degree in Accounting. It is a requirement that I must carry out a research during the final year, to be issued to the faculty for approval. The research project is a partial fulfillment for the granting of the Bachelor of Commerce Accounting Degree. My research topic is entitled:

**‘Impact of capital structure on bank’s financial performance’**. I particularly desire to carry out interviews with two accountant personnel. It will be greatly appreciated if the relevant respondents attend the interview. I am looking forward to your assistance in data gathering. The information obtained from this research study will be strictly for academic purpose and will be treated with utmost confidentiality.

Yours sincerely

.....

Perditah Machingaifa

Stamp