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**Effects of mergers and acquisitions on bank performance. A Case study of CBZ Bank.**

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**SUPERVISOR: DR MAGWEVA**

**A DISSERTATION SUBMITTED IN FULFILMENT OF THE REQUIREMENTS  
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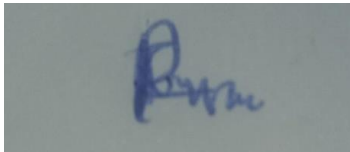
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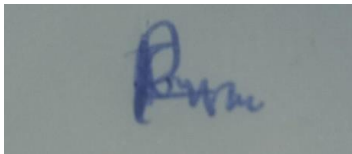
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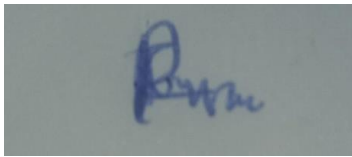
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## Declaration

I, Ruth Tafira, do hereby declare that this research project is a presentation of my own work except to the extent indicated in the Acknowledgements, References and by comments included in the body of the report, and that it has not been submitted in part or in full to another University or any other Institution of higher learning.

A rectangular box containing a handwritten signature in blue ink. The signature appears to be 'Ruth Tafira'.

Student Signature

30 Nov 2023

Date

## **DEDICATION**

This project is dedicated to my children and husband who have expressed their love and faith in me through the years. I am also happy to mention the support from my family and friends who have helped me to go through both challenging and rewarding moments in life, this one included. I hope all of you are motivated to exceed this level that I have set and reached.

## **ACKNOWLEDGEMENTS**

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## **ABSTRACT**

This study aimed to examine the effect of mergers and acquisitions on the financial performance of commercial banks operating in Zimbabwe. This will enable researchers to develop a more informed framework which is usable when assessing the financial performance and sustainability bank mergers. The study investigated commercial banks operating in Zimbabwe and a quantitative research approach was employed. Primary data was collected from audited annual reports and the obtained data was analysed using SPSS and Microsoft excel. The study revealed that bank profitability, solvency and capital adequacy improved following the merger between CBZ Bank and CBZ Building Society. The study also identified that liquidity deteriorated following the merger. There is therefore need for banks to favourably consider the route of mergers and acquisitions as a survival strategy in the face of the economic challenges being faced in the local economy. This will ensure commercial banks are able to realize their main goal of stimulating economic activity. In addition, the government need to de regulate this sector and reduce the regulatory costs associated with mergers and acquisitions.

# TABLE OF CONTENTS

## Contents

RELEASE FORM.....	ii
APPROVAL FORM.....	iii
DEDICATION.....	iv
ABSTRACT.....	iv
LIST OF ACRONYMS.....	v
TABLE OF CONTENTS.....	vi
CHAPTER ONE:.....	12
INTRODUCTION TO THE STUDY.....	12
1.0 INTRODUCTION.....	12
1.1 BACKGROUND OF THE STUDY.....	14
1.2 STATEMENT OF THE PROBLEM.....	15
1.3 JUSTIFICATION OF THE STUDY.....	15
1.4 OBJECTIVES OF THE STUDY.....	15
1.5 RESEARCH QUESTIONS.....	15
1.6 SIGNIFICANCE OF STUDY.....	16
1.7 LIMITATIONS.....	16
1.8 ASSUMPTIONS OF THE STUDY.....	16
1.9 DELIMITATIONS.....	17
1.10 DEFINITION OF TERMS.....	18
1.11 ORGANIZATION OF THE STUDY.....	18
1.10 CHAPTER SUMMARY.....	19
CHAPTER TWO.....	20
LITERATURE REVIEW.....	20
2.0 INTRODUCTION.....	20
2.1 MERGERS AND ACQUISITIONS.....	21
2.1.1 Motives behind mergers and acquisitions.....	21
2.1.2 Performance Improvement.....	21
2.1.3 Synergies in Mergers.....	21
2.1.4 Growth.....	22
2.1.5 Diversification.....	22
2.1.6 Economies of Scale.....	22
2.17 Market Strategy.....	22



2.1.8 Tax .....	23
2.1.9 Management Incentive and Pay .....	24
2.1.10 Factors influencing Firm Performance .....	24
2.2 THEORETICAL REVIEW .....	25
2.2.1 Value Increasing Theories .....	25
2.2.2 Efficiency Theories .....	25
2.2.2.1 Valuation Theories .....	26
2.2.2.2 Value Theory .....	26
2.1.8 Value Destroying theory .....	26
2.3 CONCEPTUAL FRAMEWORK .....	26
2.3.1 Profitability .....	27
2.3.2 Capital Adequacy .....	27
2.3.3 Solvency .....	27
2.3.4 Liquidity .....	28
2.4 EMPIRICAL REVIEW .....	29
2.4.1 Mergers and Acquisitions .....	30
2.4.2 Solvency .....	31
2.4.3 Capital .....	32
2.1.8 Profitability .....	33
2.5 RESEARCH GAP .....	34
2.1.8 Summary .....	35
CHAPTER 3 .....	36
3.0 Introduction .....	36
3.1 Research Philosophy .....	36
3.2 Research Methodology .....	36
3.3 Research Design .....	36
3.4 Empirical Model .....	37
3.5 Variables Description .....	37
3.5.1 Profitability Analysis .....	37
3.5.2 Capital Adequacy Ratio .....	38
3.5.3 Liquidity .....	38
3.5.4 Solvency .....	39
3.6 Justification Estimation Techniques .....	40
3.7 Data Sets .....	40
3.7.1 Diagnostic Tests .....	41
3.8 Two paired t tests .....	41
3.9 Data Presentation and Analysis plan .....	41
3.10 Summary .....	42
CHAPTER 4 .....	43
4.0 Introduction .....	43
4.1 Data Presentation and Analysis .....	43
4.1.1 Profitability .....	44
4.1.2 Liquidity .....	44
4.1.3 Capital Adequacy Ratio .....	45
4.1.4 Solvency Debt Ratio .....	46
4.2 Hypothesis Testing .....	46
4.2.1 Paired Two sample T Test Profitability .....	47
4.2.2 Two paired T test Liquidity .....	47
4.2.3 Solvency .....	47
4.2.4 Capital Adequacy .....	48
4.3 Regression Analysis .....	49
4.3.1 Interpretation of r .....	51
4.3.2 Correlation Analysis .....	52
4.4 Diagnostic Tests .....	53
4.4.1 Homoscedasticity Test .....	53

4.4.2 MultiCollinearity .....	54
4.4.3 Cointegration.....	54
4.4.4 F Static .....	55
4.4.5 Major Findings.....	55
4.4.1 Discussion of Findings.....	56
4.5 Summary .....	56
CHAPTER 5 .....	57
5.1 Summary of studies.....	57
5.2 Summary of major findings .....	58
5.3 Conclusions and recommendations.....	59
5.4 Recommendations for further study.....	60

## **LIST OF TABLES**

Table 1 Return on Assets.....	40
Table 2 Liquidity pre and post-merger.....	41
Table 3 Capital Adequacy Ratios pre and post-merger.....	42
Table 4 Solvency .....	43
Table 5 Two paired t test profitability .....	40
Table 6 Two paired t test liquidity.....	40
Table 7 Two paired t test Solvency.....	40
Table 8 Two paired t test Capital Adequacy Ratio.....	40

## **LIST OF FIGURES**

Fig 1 Interpretation of r.....	43
Fig 2 Correlation Results.....	44

## **APPENDICES**

Appendix A: SPSS Data results.....	59
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# CHAPTER I

## INTRODUCTION

### 1.0 Introduction

The goal of the research project was to determine how mergers affected Zimbabwe's commercial banks' performance. Bank consolidations and acquisitions are among the most prominent inorganic venture strategies utilized globally to establish and expand commercial banks. However, studies reveal that the implications of mergers and acquisitions for business banks' financial displays vary. Although several studies on mergers and acquisitions have been conducted globally, further research is anticipated in Zimbabwe because there is less data about the implications of these transactions for business banks' financial statements. The researcher's goal was to evaluate how mergers and acquisitions have affected the functioning of Zimbabwe's commercial banks that have followed this path. The context of the study and its importance are presented in this part, which inspired the student to investigate this subject further. The problem description, research questions and objectives, study constraints and delimitations are also examined. Finally, a summary of the chapter is provided at the conclusion.

### 1.1 Background to the research study

Since gaining independence, Zimbabwe has seen many economic crises, which have affected the banking sector. Commercial banks have responded by implementing a variety of measures in an effort to withstand the challenging economic circumstances (Golubov, 2013). This has led to an increase in mergers and acquisitions in Zimbabwe's banking industry recently. In an effort to restructure their company and enhance their financial outlook, a few banks have even gone through this process. For instance, First Capital Bank Malawi purchased the operations of Barclays Bank Zimbabwe in 2012. In order to become a single company, FBC Bank and FBC Building Society combined in the same year. According to the RBZ Report (2012), mergers and acquisitions are defined as transactions involving corporate takeovers, corporate restructuring, or corporate control. According to Fatima (2014), a merger or acquisition is any corporate action, including takeovers, corporate restructuring, or corporate control, that changes the ownership structure of a corporation. According to). With the level of competition in Zimbabwe's banking sector rising every day, the most common long-term corporate

restructuring approach nowadays is mergers and acquisitions. Through these mergers and acquisitions, banks are able to grow their businesses and create new safe havens, which might lead to increased income.

A merger is defined as the combination of two or more companies with the intention of maintaining the original identity of the new firm. A consolidation occurs when two or more companies merge to form a single new company. Block et al. suggest that a consolidation may be implemented when the firms have similar market power and size (2009). Brigham and Daves (2010) define a merger as any agreement that unites two or more antecedent economic units to form a single one. An acquisition is the taking over of the share capital of another firm in exchange for cash, loan stock, common stock, or a combination of these. The outcome is the integration of the target's identity with the acquirer's. Pike and Neale (2003).

The sole owner of CBZ Bank Limited is CBZ Holdings Limited, a locally founded company that is listed on the Zimbabwe Stock Exchange. CBZ was founded in 1991 after the Zimbabwean government took over the Bank of Credit and Commerce, which had closed. The government acquired 100% ownership of the bank. After being privatized in 1998, the bank issued rights as part of its recapitalization program, which resulted in a reduction of government control. After that, the bank became public on the Zimbabwe Stock Exchange. ABSA, which had previously owned 24.093% of CBZ Holdings Limited (CBZH), sold its shareholding following the acquisition of the ABSA group. The deal followed the terms of the CBZH Share consolidation (share buyback program), which was approved by the company's shareholders on November 14, 2006, during an extraordinary general meeting. The share acquisition resulted in the termination of the technical assistance agreement between ABSA Bank and CBZ Bank, and the resignation of ABSA's candidates to the boards of CBZH and CBZ Bank.

For the quarter ending June 30, 2010, the organization integrated its operations with those of CBZ Building Society in an effort to save costs. As a result, CBZ Building Society is currently a bank subsidiary. The Reserve Bank authorized the bank and society's official merger in October 2012. After the building society was divided into the operations of CBZ Bank and the Reserve Bank approved the legal amalgamation of the commercial bank and the building

society, CBZ Holdings received permission from the Financial Services Authority (FSA) in February 2013 to liquidate Forestdale, the direct parent company of CBZ Building Society. More study is required in Zimbabwe since there is a lack of knowledge on the impact of mergers and acquisitions on the financial performance of commercial banks, despite the fact that these transactions have been the focus of several studies undertaken globally. The purpose of this study is to investigate the effects of mergers and acquisitions on CBZ Bank following its merger with CBZ Building Society.

Mergers and acquisitions have increased in the last several years across the majority of the region's countries, including Zimbabwe. In an attempt to improve financial prospects and streamline operations, several banks have recently undergone mergers and acquisitions (Phiri, 2022). For instance, as part of this plan, ABSA purchased Barclays Africa Limited in 2012. The sub-Saharan African financial services corporation Atlas Mara Limited purchased Finance Bank Zambia Limited and its subsidiaries in Zambia in 2016. This was achieved by the merger of Finance Bank Zambia and African Banking Corporation Zambia Limited (Banc ABC Zambia), an Atlas Mara affiliate located in Zambia, to become Atlas Mara Zambia.

Studies reveal that the financial performance of commercial banks hasn't always benefited from mergers and acquisitions. In their various research on the financial performance after these transactions, Gupta (2015) and Mutai (2011) came to the conclusion that mergers and acquisitions had a beneficial effect on the financial performance of the banks they examined. But after researching the State Bank of India's pre and post-merger financial performance study, Honey concluded that there had been no improvement in the financial performance in the post-merger era (Gupta, 2016). Even though mergers and acquisitions have been the focus of several studies undertaken globally, more research is required in Zimbabwe since it is unclear how these transactions affect the financial performance of commercial banks. Therefore, the purpose of this study is to close this research vacuum and assess the impact of corporate combinations on the financial performance of Zimbabwe's commercial banks.

## **1.2 Statement of the Problem**

Through mergers and acquisitions, commercial banks may be able to grow their businesses and create new safe havens, which might lead to increased income. Mergers and acquisitions, however, can go wrong. The main negative effects of mergers and acquisitions, according to Junni et al. (2015), are focused on both tangible and intangible assets, such as knowledge bases and management skills and talents. There hasn't been much research done on how mergers and acquisitions (M&A) affect the financial performance of commercial banks in Zimbabwe. The study's objective is to evaluate the impact of these corporate mergers on the performance of Zimbabwe's commercial banks. By analyzing the impact of mergers and acquisitions on the corporate performance of banks that are currently in operation in Zimbabwe, this study seeks to close the existing knowledge gap. Given the frequency of bank failures and banking crises in Zimbabwe, the research will also address the concerns of stakeholders who see bank mergers and acquisitions as an alternative corporate strategy option to rescue financially ailing institutions. It will assist financial industry decision-makers who are looking for long-term, sustainable management techniques to boost their commercial banks' financial performance.

## **1.3 Justification of the study**

Most of the research and literature on the topic is from outside sources, mostly from western countries where the dynamics and importance of commercial bank merger operations are different from those of developing countries like Zimbabwe. This includes Abbas's (2014) study on Pakistani commercial banks. Although a lot of study has been done on mergers and acquisitions, the findings aren't necessarily trustworthy. Research on mergers and acquisitions in Zimbabwe and the surrounding region is still in its early stages, and the findings are not totally conclusive, according to Marangu (2007). Thus, this study reexamines the effects of mergers and acquisitions in the banking industry. Thus, the study provides a response to the question of whether, before and after a merger, the financial performance of commercial banks in the area changes or stays the same.

This necessitated a detailed research into the impact of commercial bank mergers on the financial performance of Zimbabwe. There hasn't been much research done on how mergers and acquisitions (M&A) affect the financial performance of commercial banks in Zimbabwe.

The study's objective is to evaluate the impact of these corporate mergers on the performance of Zimbabwe's commercial banks. By analyzing the impact of mergers and acquisitions on the financial performance of commercial banks in Zimbabwe, this study seeks to close the existing knowledge gap.

#### **1.4 Objectives of the research study**

Evaluating the effect of mergers and acquisitions on the financial performance of commercial banks is the study's main goal.

The sub aims of the research study are:

1. To examine how mergers and acquisitions have affected Bank liquidity
2. To establish the impact of mergers and acquisitions on the solvency for CBZ Bank
3. To ascertain how mergers and acquisitions done have affected capitalization
4. To-establish how mergers impact Bank profitability ((Return on Assets, Return on Capital Employed)

#### **1.5 Research Questions**

In relation to the stated objectives, the study seeks to answer the following research question:

1. How have mergers and acquisitions have affected Bank liquidity?
2. What effect do acquisitions and mergers have on CBZ Bank's solvency?
3. What has been the impact of the corporate combination on profitability (Return on Assets- ROA)
4. How have mergers and acquisitions done affected bank capitalization?



### **1.6 Significance of the study**

The investigation may shed further light on other issues relating to mergers and acquisitions in the financial services sector, including how laws are created.

It will assist financial industry decision-makers who are looking for long-term, sustainable management techniques to boost their companies' financial success. This means that this study will be useful to managers, investors, brokers, consulting companies, creditors, the government, and investment banks.

The results of the study will aid scholars and college students in their understanding of the implications of mergers and acquisitions. It will serve as a resource for more research on mergers and acquisitions.

### **1.7 Limitations of the study**

Even with best efforts to get objective data, some circumstances would always make collection of the data impossible. The following were the limitations:

Due to resource limitations, it was not able to cover all of the commercial banks that made up the target population under inquiry; therefore, the research only examined CBZ Bank out of all other commercial banks operating in Zimbabwe.

### **1.8 Assumptions of the Study**

The following are the study's underlying presumptions:

- The results of the investigation into CBZ Bank accurately represented the impact of bank mergers on the financial performance of commercial banks doing business in Zimbabwe.
- The goal of acquisitions and mergers is to boost profitability.

## **1.9 Delimitations of the study**

Only CBZ Bank was included in this research. This bank is the largest commercial bank in Zimbabwe due to its market share, assets, and branch network, which is why the researcher focused on it. As performance measures, this study only examined profitability, liquidity, and solvency. The years 2009 through 2015 were the only years included in the study.

## **1.10 Definition of terms**

**Corporate Combinations-** An acquisition in which one company (the acquirer) gains control over another (the acquiree) is known as a business combination. Instead of expanding through natural (internal) growth, businesses frequently expand through business mergers.

**Mergers and Acquisitions-** refers to the financial transactions between corporations that result in the consolidation of companies or their primary commercial assets. A business can make a tender offer for another company's shares, conduct a hostile takeover, buy the other business altogether, combine with it to form a new business, or obtain some or all of its significant assets. They're all M&A-related.

**Profitability-** Capacity of a firm to make money.

## **1.11 Acronyms and abbreviations**

ROI – Return on Investment

CAMELS - a model used to measure bank performance

ROE - return on equity

ROA- Return on Assets

RBZ –Reserve Bank of Zimbabwe

SMEs – Small to Medium Enterprises

### **1.12 Organization of the study**

The introduction, study background, goals, questions, problem statement, and study significance were all covered in this chapter. The conceptual, theoretical, and empirical literature review relevant to the topic is covered in Chapter 2. The research data collection process in the subject region is examined in Chapter 3. The analysis of data is covered in Chapter 4, which also provides a descriptive report of the research and an analysis of the data collected from the section three surveys and interviews. Chapter 5 concludes with the study's recommendations, conclusion, and chapter summaries.

### **1.13 Summary**

This chapter included the study's backdrop, problem description, delimitation, objectives, research questions to be answered, and difficulties the researcher encountered while conducting her investigation. The problem's literature review will now be the subject of the next chapter.

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

Literature from other researchers who have worked in the same topic of study is included in this chapter. The chapter will also look at conceptual and theoretical reviews that are pertinent. Previous research and empirical results on bank mergers are also analyzed in addition to the research gap.

#### **2.1 Mergers and Acquisitions**

The uniting of two or more companies in a way that maintains the original company's identity is known as a merger (Choi, 2004). A consolidation occurs when two or more companies merge to form a single new company. A consolidation may be implemented if the businesses are of similar size and power in the market (Block, 2009). A merger is any arrangement that results in a single economic unit from two or more previous ones. An acquisition is the taking over of the share capital of another firm in exchange for cash, loan stock, common stock, or a combination of these. According to Choi, this causes the target's identity to be absorbed by the acquirer (2004). According to Phiri (2022), a takeover occurs when a firm acquires another without the consent of the target company's current management. Typically, the acquiring business works with the major shareholders, buys shares through open market transactions, or asks for proxies.

##### **2.1.1 Motives behind Mergers and Acquisitions**

For a variety of reasons, a corporation may choose to merge with or purchase another business. Ever since the advent of globalization, companies have faced fierce competition from one another, potentially endangering or restricting investment opportunities. To succeed in the cutthroat market and boost its financial development, a company may need to employ a range of management strategies, such as joint ventures, retrenchment, divestiture, and mergers and

acquisitions. Mergers and acquisitions (M&A) are among the most well-known inorganic investment strategies used to grow and broaden business activities globally. "Activities involving takeovers, corporate restructuring, or corporate control that alter the ownership structure of firms are known as mergers and acquisitions" (Kumar, 2013, p. 2). The following are some of the explanations that are discussed in detail:

### **2.1.2. Performance Improvement/Value creation**

According to Cartwright (1992), the goal of the merger or acquisition is typically taken into consideration when evaluating the effectiveness of mergers and acquisitions (M&A). Choi (2004) defines M&A performance as assessing the results of M&A transactions in relation to metrics such as enhanced organizational strength, better strategic stance, financial stability, and generation of market value. This leads one to the conclusion that when a firm considers merging or purchasing another business, management strategy has a significant impact on M&A performance. Creating long-term value should always be the main objective of any M&A. The goal of cutting expenses or raising profits is usually the driving force behind M&A deals. Enhanced market power and synergy are the two primary methods by which this may be accomplished. In an ideal scenario, the firm after the merger would operate as a whole and surpass its individual parts. These days, the main parties engaged in assessing M&A performance are the company's shareholders. However, it is always crucial to remember that there are a wide variety of stakeholders in businesses, each with unique goals and viewpoints on output.

Phuyal (2017) argues that value is the unique characteristic of measurement in a market economy because, when individuals invest, they do so with the expectation that, when they sell, the value of their investment would have increased relative to its cost, making up for the risk they incurred. The capacity of a business to generate value for its shareholders and the amount that value is worth in a market economy define a company's value. Thus, firms should invest investor money at rates of return higher than the needed rate of return or the rate (cost of capital) that investors expect to get in return for the use of their capital in order to generate value (Gaughan, 2007). Phiri (2022) further underlined that businesses create greater value in proportion to their ability to grow sales and finance larger investments at rates of return that are competitive. Value is determined by two factors: growth and return on invested capital

(ROIC) relative to cost. Only businesses with a clear competitive edge are able to maintain rapid expansion and excellent returns on investment. This is the relationship between the ideas of competitive advantage and value generation.

### **2.1.3. Synergy in mergers**

Synergy is the widely acknowledged term for the extra advantage that results from merging the resources of the acquiring and acquired firm. If the combined productivity of the combined company is higher than that of its separate divisions before the merger, the combined company may also benefit from a synergy. In other words, the  $2+2=5$  effect may be used to describe synergy. According to this theory, synergies from mergers result in profitability for the combined businesses because of a number of variables, including scale economies, improved management competencies, operating economies, and creative and inventive thinking. Gupta (2015) claims that in order to boost the performance of the acquired business, the traditional synergy model requires the acquiring company to transfer resources—typically management and knowledge—to the new subsidiary.

### **2.1.4. Growth**

Synergy is the widely acknowledged term for the extra advantage that results from merging the resources of the acquiring and acquired firm. If the combined productivity of the combined company is higher than that of its separate divisions before the merger, the combined company may also benefit from a synergy. In other words, the  $2+2=5$  effect may be used to describe synergy. According to Gaughan (2007), operating economies, enhanced management skills, inventiveness, and scale economies are only a few of the reasons why synergies through mergers result in profitability for the combined companies. The traditional synergy strategy requires the acquiring business to shift resources, claims Choi (2004)—typically management and knowledge—to the new subsidiary in order to improve the performance of the acquired firm. Companies in the same or related industry might experience growth through M&A (horizontal mergers).

Combining businesses with comparable goods and services, clientele, or markets allows firms to take advantage of economies of scale and scope, which helps hasten business expansion. However, by combining companies in different industries from the acquirer, new and distinct markets may be reached, providing the individual businesses with even more potential for

growth than they already have. As a result, internal development may be seen as a gradual and unpredictable process. Consequently, businesses have the option to expand both inside and outside of their sector. However, M&A enables a business to expand swiftly.

### **2.1.5. Diversification**

According to Motta (2020), diversification is crucial while venturing outside of one's company. Working in several industries and expanding in a way that affects the company's worth and increases shareholder value is known as diversification. Although diversity may take various forms, product and geographic variation are the most prevalent. The goal of these kinds of projects is to lower risk. Risk may be characterized as the degree of risk that lenders, investors, or other stakeholders perceive; examples of this include business risk and bankruptcy risk. According to Choi (2006), there is a higher chance that two separate companies will file for bankruptcy than that of them joining forces to form a conglomerate. Merging the financial resources of two businesses lowers the risk to a shareholder compared to merging the shares of two distinct companies (Choi, 2006). When diversity leads to a growth in appropriate technical, managerial, and marketing skill, market share frequently rises (Choi, 2004). Different merger structures could all lower business risk in different ways.

By managing the production process, vertical integration lowers risk. Vertical mergers minimize uncertainty because they diminish competition. Through conglomerate mergers, a company may diversify by putting its eggs in many baskets. According to some, conglomerate mergers are frequently carried out in the managers' best interests, even when shareholders may diversify their assets on their own (Motta, 2020). The concept of diversification through mergers and acquisitions has benefits in addition to the contradictory outcomes. A company can achieve its objectives more quickly and easily using internal resources than if it were to take longer. Through M&A-driven diversification, a firm can also acquire executives with experience in the industry or sector it is seeking.

### **2.1.6. Economies of scale**

The primary objective of horizontal mergers is to achieve economies of scale. According to Cartwright (1992), the main goal of an investment is to lower the overhead costs per unit. The reduced operational cost (per unit) that results from spreading out fixed expenses over a larger production scale is known as an economy of scale. Stated differently, economies of scale result in decreased operating costs for the merged company. By offering clients cheaper pricing as a result of cost reductions, the goal is to create a win-win scenario for all parties. However, other people think that mergers and acquisitions lead to industry monopolization, which would have the opposite impact.

### **2.1.7. Market standing**

Mergers are often used to boost a company's position in the market by achieving similar goals such as growing market share and creating dominance in a certain area. Reducing competition is an important consideration when considering mergers. It is frequently crucial to use mergers to keep a crucial supply source safe from a rival (Cartwright, 1992). The capacity of a company to maintain charge prices greater than those of its rivals is known as market power. A merger is considered effective when it strengthens the dominant position in the market or reduces the possibility of new competitors emerging. Moreover, mergers protect positions of dominance (Choi, 2004). It has also been observed, though, that there isn't much proof from the merger itself that dominance in the market increases profitability (Choi, 2006).

### **2.1.8 Tax**

Mergers may benefit companies and individuals in numerous ways by reducing their tax burden. Tougher laws, however, may be able to limit businesses' unlawful exploitation of tax benefits. Sometimes, large, profitable companies merge with certain loss-making ones to receive a tax expenditure break (Jallow, 2017). Minor proprietors of purchased companies usually receive considerable tax savings upon merging with larger corporations. Companies that are losing money might choose to partner with fully taxed companies to increase the value of their own tax benefits. This is because taxable firms are permitted by law to use their own present and future revenues to offset the losses and credits of an acquired company. Nevertheless, this would not be feasible in other situations. As a result, acquired companies could benefit from paying less in taxes. On the other hand, investors in recently acquired small businesses usually receive tax benefits. Conversely, these benefits are only accessible in situations where payment is made in shares. They obtain shares in a more secure, substantial,



and successful firm and avoid paying capital gains tax since their prior shares are not sold but are instead swapped as part of organizational reform (Gaughan, 2002). Several other benefits also emerge throughout the merging process. Asset transfers inside the group are exempt from stamp duty. Capital asset transfers are permitted on a no-profit, no-loss basis. Interest payments inside group enterprises may be made with the intention of using interest as a tax shelter (Choi, 2006). Furthermore, firms who purchase ill units might receive tax advantages from a number of nations.

### **2.1.9 Managerial Incentives and pay**

The size of the organization typically affects management compensation (Motta, 2020). Due to the attraction of higher salaries and other perks, especially those offered by companies with diverse ownership and control, managers are more likely to participate in mergers. This is often the case in companies that offer rewards for employee achievement. Usually, these types of objectives backfire and result in failed mergers. Managers typically prioritize their personal interests over the success of the business. Their desire to grow their business and acquire other companies stems only from the status and power that come with being part of a larger organization. Numerous factors, such as employment, recreation, and other on-the-job activities, influence how many people formulate their growth strategies (Motta, 2020). Work, play, and various forms of on-the-job activities are a few factors that influence many people's growth policies (Motta, 2020). Buyers and bidders are obviously rewarded lavishly with big managerial profits and salaries. Investors in the purchasing company frequently lose money in these situations. Managers frequently benefit at the expense of shareholders. Therefore, only successful mergers that offer genuine value must be acknowledged. Another issue that has to be addressed in mergers is the disparities in power, influence, and control amongst the CEOs of the merging companies (Gaughan, 2007).

### **2.1.10 Factors Influencing Firm Performance**

A firm's growth and performance may be impacted by a variety of factors that can be looked at in the "internal environment" and "external environment." The results on the relationship between company age and performance in the internal environment are not entirely obvious. The company's manufacturing capabilities allow it to create a reputation in the market, manufacture a variety of commodities, including specialized and high-quality items, and reduce operating costs—all of which are critical for preserving competitiveness (Gaughan, 2007). However, the majority of small enterprises face difficulties due to outdated equipment, subpar

product design, and subpar goods. Choi (2006) discussed his thoughts on organization and economy. They argue that industrial organization economics has shown to be immensely beneficial to academics investigating strategy content by providing a basic theoretical perspective on the influence of market structure on firm strategy and performance. The primary determinants of firm-level profitability are the characteristics of the industry the company operates in, the firm's location in respect to its competitors, and the kind or quantity of the firm's resources; however, there are several specific models. Industry variables have been studied by several scholars.

According to Choi (2004), size might also indicate approach variation, which has a track record of being associated with subpar results. Between 15% and 40% of the variance in profit rates between businesses may be attributed to the conventional economic model of firm performance. There may be at least three reasons for the residual variation, excluding measurement errors and random effects. First, there can be substantial economic components that are unknown in size, such as resources exclusive to a certain industry or trading partner. Second, aggregate analysis would be difficult since the model anticipates that intervening economic factors may differ from case to case.

## **2.2 Theoretical Review**

The theoretical analysis has been split into two primary schools: the value-increasing, efficient market schools and the value-decreasing agency schools, according to certain actual data indicating mergers underperform the market.

### **2.2.1 The Value-Increasing Theories**

The theoretical analysis has been split into two primary schools: the value-increasing, efficient market schools and the value-decreasing agency schools, according to certain actual data indicating mergers underperform the market.

#### **2.2.1.1 Efficiency Theory**

Mergers only happen when it is anticipated that they would provide enough workable synergies to make the deal advantageous for both sides, according to Wolfe's (2011) theory of efficiency. The offering and approval of a "friendly" merger are the outcome of symmetric expectations of gains. It is presumed that the owners of the target firm will not approve of a sale or acquisition if they do not believe it would increase their value, and that they will force the bidder to back out of the deal if they believe it will have the opposite effect. According to the

value-enhancing school of thought, mergers happen because the target and the acquirer may collaborate to create "synergies" that raise the company's worth (Motta, 2020). According to the efficiency hypothesis, mergers only happen when it is anticipated that they would provide sufficient practical synergies to make the agreement advantageous for both sides. The offering and approval of a "friendly" merger are the result of symmetric expectations of gains. It is presumed that the owners of the target firm will not approve of a sale or acquisition if they do not believe it would increase their value, and that they will force the bidder to back out of the deal if they believe it will have the opposite effect. According to this theory, managers who provide the most value to the owners would oversee the company until a different group discovers a more effective technique to replace them (Gaughan, 2007).

### **2.2.1.2 Valuation Theory**

According to this theory, which Vishny presented in 2003, investors seek to sign contracts that would increase the worth of both their own company and the target company. Purchasing companies that the market has undervalued is the aim. Valuation is an essential aspect of M&A since it helps both parties come to an agreement on the deal closing price. There aren't many well-known valuation models, but DCF is the one that is used or cited the most.

### **2.2.2 The Value-Destroying Theories**

Jallow (2017) asserts that mergers and acquisitions continue to have a "inconclusive" and, in the worst instance, "systematically detrimental" effect on the performance of the acquiring company. It is estimated that between 60 and 80 percent of mergers are viewed as "failures," and a number of value-defying ideas have been proposed as possible explanations. There are two categories of value-destroying ideas. First, while having goals that typically generate value, the bidder's management is "bounded rational," which implies that informational limitations cause them to make mistakes and lose money. The second makes the assumption that managers are rational but self-serving, maximizing a private utility function and, at most, not increasing the value of the organization.

#### **2.2.2.1 Management Hubris Theory**

The hubris hypothesis was created by Roll (1986) and posits that managers overestimate their capacity to generate synergies due to their overconfidence, even when they may truly wish to raise the value of their firm. Overconfidence raises the possibility of overpaying and puts the

winning bidder in a winner's curse scenario, which significantly raises the likelihood that the process will fail.

### **2.2.2.3 Portfolio Theory**

Markowitz's portfolio theory (1952) divides the process of selecting a portfolio into two parts: the trust stage, which ends with confidence in certain current portfolios, and the observation stage, which uses information or experience from prior concerns. In the second step, that trust will lead to selecting the right portfolio. Investors will consider two factors, according to Markowitz's research: the return on investment and the level of risk. When considering a possible acquisition, investors will always choose assets with little risk and a high rate of return.

### **2.2.2.2 Management Discretion theory**

The concept of management discretion, first put out by Jensen (1986), holds that excessive liquidity, or free cash flow (FCF), rather than overconfidence, is what leads to wasteful expenditures. The theory posits that organizations with more internal resources than what is necessary to fund projects with positive net present value would act more rashly and launch more extensive strategic plans with less thought than their financially strapped competitors. When supervisors have more freedom and are wealthy, they are more likely to make poor decisions when they run out of excellent ones (Phuyal, 2017). Therefore, the theory contends—as does the hubris thesis—that managers, who are often well-intentioned, make poor judgments just as a result of having inadequately quality information at their disposal.

According to the management entrenchment theory, managers invest primarily to reduce the chance of replacement, which causes merger failures. It implies that managers pursue initiatives in an effort to promote themselves by raising their personal worth to the business, as opposed to maximizing economic value. Encouraging managers would therefore result in manager-specific investments that increase the cost to shareholders to replace them, hence diminishing value, as free resources are diverted from options that would maximize shareholder value and instead are spent on manager-specific assets. In order to improve their positions and lessen profit volatility, managers should promote varied mergers, according to Gupta (2015), who offers experimental data to support this idea. According to empire theory, managers are specifically encouraged to invest in growing their company's revenue or asset base, subject of course to a minimum profit criterion.

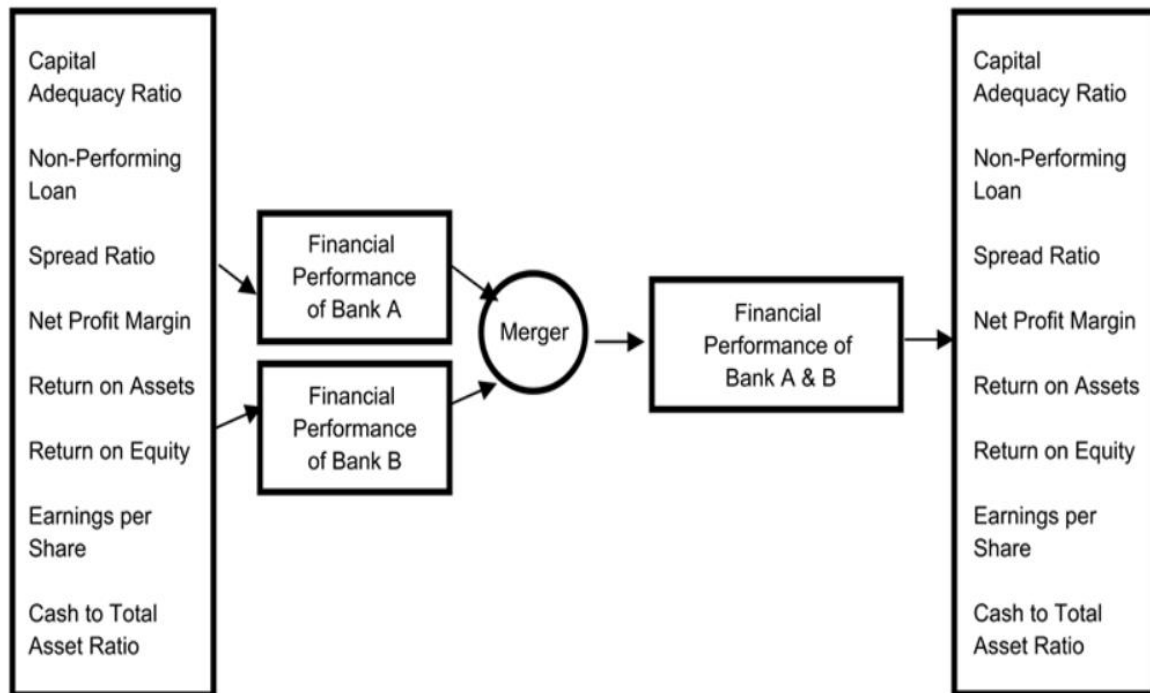
### **2.2.3. Free Cash Flow Theory**

According to this theory, the management of the purchasing firm obtains excessive benefits in the form of high managerial salaries and profits. Investors in the purchasing company frequently lose money in these situations. Managers frequently benefit at the expense of shareholders. Therefore, only successful mergers that offer genuine value must be acknowledged. Another issue that has to be addressed in mergers is the disparities in power, influence, and control amongst the CEOs of the merging companies (Gaughan, 2007).

### **2.3 Conceptual Framework**

The model used in the study was the same one used by Shrestha, Thapa, and Puyal in 2017. They employed a modified version of the CAMEL framework, looked at various ratios, and investigated the pre- and post-merger eras of the chosen institutions. The model makes use of both primary and secondary data to evaluate the impact on financial performance prior to and following the merger. The CAMEL model evaluates a bank's overall soundness based on five criteria: earning quality, capital sufficiency, asset quality, asset management, and liquidity. These factors are rated by the model according to how they affect financial success. The required minimum capital reserve for a bank is determined by its capital adequacy. The team's management effectiveness is evaluated using the management efficiency factor, whereas the quality of the bank's assets is evaluated using the asset factor. The long-term viability of the bank is assessed by the profitability quality aspect, which also estimates the interest rate and liquidity risk of the bank using the liquidity assets component.

## Model to evaluate the impact of the merger on bank performance by Shrestha



Using these frameworks, theories, and the literature review, the researcher was able to develop a new conceptual framework that examines three dependent variables of financial performance indicators both before and after a merger and acquisition. The profitability, solvency, and liquidity ratios are as follows.

Profitability, liquidity, capitalization, and solvency are the independent factors that are being examined both before and after the merger.

### 2.3.1 Profitability Analysis

The most often used indicator to assess financial success is the management's capital allocation inside the organization. Because it shields them from adverse events like losses from substantial claims or unanticipated negative changes to the investment portfolio, profitability is seen by management and shareholders as the most important measure of financial performance (Phiri, 2022). Return on equity and return on assets are the two profitability ratios that are most frequently used to assess a company's financial performance, and these ratios will be employed in this study.

### **2.3.2 Capital Adequacy Ratios**

They are related to the total amount of financial leverage that an organization employs. Businesses that have a lot of financial debt tend to have more volatile profit patterns. These ratios demonstrate how successfully the assets of a business offset the risks incurred by its operations. Two important indicators of capital sufficiency are the ratio of shareholders' equity to total assets and the ratio of shareholders' equity to total loans. This research will concentrate on the ratio of shareholders' equity to total assets.

### **2.3.3 Long Term Solvency**

A company's solvency is its ability to withstand losses for an extended period of time, especially more than a year. Like liquidity, but used to long-term objectives as opposed to immediate ones. Long-term solvency ratios, such as Total Liabilities to Total Assets (which indicates the percentage of assets financed by creditors), Shareholders Equity to Total Assets (which indicates the percentage of assets financed by fund owners), and Shareholders' Equity to Total Loans (which indicates the percentage of loans covered by fund owners), are used to evaluate a company's riskiness. The two ratios used in this analysis will be Total Liabilities to Total Assets and Shareholder's Equity to Total (Phiri, 2022).

## **2.4 Empirical Evidence on Mergers and Firm Performance**

The impact of mergers on the performance of commercial banks has been the subject of several studies, the results of which are summarized here:

### **2.4.1 Mergers and acquisitions effect on Bank liquidity**

A model was developed by Carletta (2005) to estimate the potential impact of bank mergers on the overall liquidity of European banks. They discovered that significant bank mergers often increased the need for total liquidity, which in turn increased the need for liquidity from the central bank for monetary operations. They found that bank liquidity decreased as a result of bank mergers. According to Shrestha et al. (2017)'s examination of the financial outcomes of banking and financial institutions in Nepal, mergers involving bigger, more stable parties—like commercial banks—have a positive influence on performance in contrast to smaller banking and financial institution mergers. In a different research, Tarila and Ogege (2019) found that a bank's size significantly affects its performance, both before and after a merger.

His research on the impact on liquidity, however, did not identify any significant or positive correlation.

The impact of mergers and acquisitions on the financial performance of financial institutions in Kenya was examined by Mungai (2015). This study set out to determine how mergers and acquisitions affected Kenyan financial institutions' financial performance. The results show that financial institutions in Kenya lacked robust liquidity and solvency prior to mergers and acquisitions. Along with their growing profitability came a rise in their operational expenditures. Prior to mergers and acquisitions, very little of the financial performance could be accounted for by the businesses' solvency, liquidity, and operational costs. However, following mergers and acquisitions, the companies' solvency and liquidity considerably increased, improving their financial performance. Following mergers and acquisitions, the operating costs of the companies also appear to go down as their financial performance improves. Both the businesses' liquidity and financial performance, as well as their solvency and financial performance, were shown to be strongly positively correlated. On the other hand, it was clear that operational expenditures and financial performance had a somewhat negative connection.

Joshua (2011) examined how mergers and acquisitions affected the liquidity and financial health of Nigerian banks. The research is based on secondary data and makes use of a number of financial metrics, including net assets of certain banks, liquidity, gross profits, and profit after taxes. T-test analysis has been performed using SPSS. The outcomes also showed that better liquidity and financial efficiency are a direct effect of improved financial performance. Their combined mean for net and gross profits increased, according to the t-test result, while profit after taxes decreased.

#### **2.4.2 Impact of mergers and acquisitions on the solvency**

Marangu (2007) examined the impact of mergers and acquisitions on the financial performance of non-listed banks in Kenya by analyzing data from both merging and non-combining institutions. The non-merged non-listed banks were selected at random, even though they were formed in the same period as the combined banks. The analysis discovered that the banks' solvency situation considerably improved after the merger.



In order to determine whether a bank merger enhances profitability, liquidity, and solvency, Kemal (2011) examined the profitability of Royal Bank of Scotland following its merger. He did this by using accounting ratios to examine RBS's post-merger financial performance in Pakistan. In order to assess their financial records over a four-year period (2006-2009), the research used twenty essential ratios, including those related to market value, profitability, and liquidity. The findings demonstrated that prior to the merger agreement, RBS's financial performance in the areas of profitability, liquidity, solvency, asset management, leverage, and cash flows had been quite good. It indicates that the bank's financial performance was not improved by the merger arrangement.

#### **2.4.3. To identify how mergers and acquisitions done have affected capitalization**

Saluja et al. (2012) assessed the impact of the merger on HDFC Bank's financial performance using the CAMEL Model (capital adequacy, asset quality, managerial competency, earning quality, and liquidity). The analysis concluded that almost all model parameters showed an improvement in HDFC Bank's financial performance in the post-merger era. In a similar vein, Sharma and Mahima (2012) evaluated the merged institutions' financial performance using the EVA Model and discovered that mergers had positive long-term effects.

A research on the impact of mergers and acquisitions on business performance was also conducted by Maditinos et al. (2013). The study concentrated on two Greek banks that had amalgamated to become one. The primary goal of the research was to find out how the 1999 merger affected the performance of the resulting bank. There were two phases of the investigation. The merger's short- and long-term implications were examined in the first and second halves, respectively. The study's conclusions show that the combined bank was not only more lucrative and well-capitalized than the other banks in the banking sector, but it was also more competitive. Nevertheless, the analysis showed that the stock performance of the resulting bank does not always indicate how well the bank is performing, as stock value is sometimes the consequence of speculative activity, incorrect assumptions, or just a game of chance.

Bakari (2011) used secondary data that was analyzed using the t-statistic and test of equality of means for the period before and after recapitalization to look at the trend and growth implications of banks recapitalizing in Nigeria. The findings demonstrated a considerable difference between the two means and, consequently, the two periods. The findings suggested

that banks were better capitalized and less hazardous following the program when the mean of the post-recapitalization period was greater than the mean of the pre-recapitalization period. The outcome also showed that recapitalization had a little but notable impact on the expansion of the Nigerian economy.

#### **2.4.4 Mergers impact Bank profitability (return on Assets, Return on Capital Employed)**

Al-Hroot (2015) examined twelve ratios in his paper Pre- and Post-Merger Impact on Financial Performance: A Case Study of Jordan Ahli Bank. He discovered that 41.67% of the ratios showed a substantial improvement following the merger with Jordan Ahli Bank, whereas 25% (3 ratios) indicated an insignificant improvement. In addition, the merger resulted in a 66.67% improvement in Jordan Ahli Bank's performance, with the exception of 25% (3 ratios) that saw a significant fall and 8.33% (1 ratio) that experienced a slight decline. The post-merger financial performance of Jordan Ahli Bank (cash flow ratios) revealed that although the bank's performance (efficiency and leverage ratios) rose, the cash flow ratio did not significantly change.

This link was investigated in a research by Pawaskar (2001) titled "Effects of mergers on corporate performance in India". The operating results of the firms that merged between 1992 and 1995 were examined in the research, both before to and after the mergers. The investigation resulted in the development of an earnings profile. In terms of profitability, the merged companies did better than the industry. Gupta (2016) used investment ratios, management efficiency ratios, leverage ratios, debt coverage ratios, and profitability ratios to analyze the State Bank of India's financial performance across eight years of yearly data, both before and after the merger. The results of her study indicated that there was no discernible improvement in the State Bank of India's financial performance following the merger.

In a review of Kenyan commercial banks' mergers and acquisition experiences, Njoroge (2007) discovered increased profitability. She came to the conclusion that, of the nine responding banks studied, 33% agreed, 11% strongly agreed, 33% neither agreed nor disagreed, and 22% disapproved that post-acquisition operations increased profitability. The study's main finding was that improving corporate performance may be achieved through mergers and acquisitions that increase profitability.

Wanguru (2011) carried out study on the effect of mergers and acquisitions on the profitability of Kenyan commercial banks. Researchers looked at the banks' profitability five years before and after the merger. The population that was utilized consisted of 33 banks that had joined between 1994 and 2010. Profitability was determined using return on equity (ROE) and return on asset (ROA). The findings and the totals for the years of investigation were compared. It was discovered that the business was, on average, more profitable in the five years that preceded the merger than it was in that period. The study concluded that commercial bank acquisitions and mergers increase the profitability of the ensuing business.

In order to evaluate the consequences of mergers and acquisitions, Gupta (2015) looked at a variety of statistics, including the profitability, efficiency, and performance metrics of the selected institutions. The merger of BOR and ICICI Bank and the merger of CBOP and HDFC Bank were the two cases chosen for the study. According to the study's findings, the banks' performance significantly improved during the first merger between BOR and ICICI Bank in terms of net profit margin, return on assets, net interest margin, capital adequacy ratio, cost to income

## **2.5 Research Gap**

Many studies have been conducted by different researchers, as the previously listed literature demonstrates. Even while mergers and acquisitions have garnered attention lately, not much is known about how they impact Zimbabwe's commercial banks' financial performance. Second, real research done in different countries has produced contradicting results. The purpose of this study is to add to the little empirical research that have been done in Zimbabwe on the subject.

## **2.6 Summary**

The chapter looked at the ideas surrounding mergers and acquisitions before discussing the conceptual framework. Further investigation is required in this field, since an analysis of several empirical research has produced inconsistent and unclear conclusions on the financial performance of companies both before to and after to merger activity. We shall talk about the research approach in the next chapter.

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

The approach that will be used to achieve the study's objectives is the main topic of this section. It describes the population being studied, the sampling process, the research design, the research methodology, and the data collection strategy.

#### **3.1 Research philosophy**

The positivist philosophy was applied in the research. According to the positivist paradigm, information may be found by observing activity, action, or reaction objectively and quantitatively (Taylor, Bogdan, and DeVault, 2016). Nothing can be known for sure, according to positivism, if it cannot be quantified in this way. Without consideration for theory or value, scientific knowledge is generated from the collection of data obtained via observation. This suggests that anything of low or no relevance may be measured in any way that it cannot be noticed. Techniques for gathering quantitative facts and optimistic thinking go hand in hand.

#### **3.2 Research method**

Quantitative research was used as the research methodology. In quantitative research, numerical data must be gathered and examined. It is perfect for determining averages and trends, forecasting, examining correlations, and extrapolating findings for sizable groups. Quantitative methods will be used to analyze the quantitative secondary data. The use of quantitative data is objective because it removes the bias that arises from qualitative procedures that depend on judgments. The research will make use of the financial data taken from CBZ Bank's audited annual reports for the years 2009 through 2015.

#### **3.3 Research design**

Since the primary goal of the study was to determine how mergers and acquisitions affected the financial performance of high-spread commercial companies in Zimbabwe, an explanatory research method was chosen. Quantitative secondary data were analyzed using quantitative techniques. Because it removes bias that results from the application of judgments when a qualitative technique is used, the use of quantitative data is objective. The research utilized information from CBZ Bank spanning the years 2009 through 2015. Regression analysis

(OLS) was used in the study to examine how Zimbabwe's commercial banks' profitability, liquidity, and leverage position were affected by the merger of CBZ Bank and CBZ Building Society. In particular, we took into account the subsequent ratios. i. Leverage ratios (interest coverage ratio, debt to equity ratio), ii. Return on asset, profit margin, and iii. Liquidity ratios (currency ratio, quick ratio).

### **3.4 Empirical model**

The financial ratios comparison technique and t-test of changes in performance measures have been used for this study, utilizing the model created by Abbas et al. (2014). The different financial ratios' importance has been assessed by using regression analysis (Ayorinde & Abdul Ramon, 2012) and correlation analysis (Fatima and Shehzad, 2014) to look at pre- and post-merger and acquisition performance. Abbas et al. (2014) used ratio analysis to compare financial performance before and after M&A. The ratios that mattered most were the leverage, liquidity, and profitability & efficiency ratios. Singh and Gupta (2015) have employed the paired sample t-test to assess performance both before and after the merger. This study applies the ratio analysis approach of Abbas et al. (2014) to compare performance ratio-wise before and after the merger. In addition, the financial ratios of the sample bank are examined using Singh and Gupta's (2015) paired sample t-test methodology.

### **3.5 Variables description**

Based on earlier studies on sustainability and corporate performance in other developing countries, the study proposes a set of critical characteristics that characterize financial success in Zimbabwe.

#### **3.5.1 Profitability Analysis**

Return on Assets (ROA) was used in this study to evaluate profitability. Return on assets: The net income generated by each dollar of assets is measured by return on assets. This ratio calculates the total return on asset investments. The ratio of net income to average total assets is used to compute return on assets. It demonstrates the banks' effectiveness in making money by making use of their assets. For the company, a larger ratio is preferable.

$$\text{ROA} = \text{Net Income} / \text{Average Total Assets}$$

### **3.5.2 Capital Adequacy Ratio**

Capital adequacy: This is one of the factors that will be evaluated and it shows how a bank's financial soundness is measured. Depositors are somewhat reassured by the bank's capital position that they will be paid in the event of a failure. The ratio of regulatory capital (tier I + tier II) to total risk-weighted assets is used to compute capital adequacy, and it is taken from the annual report.

**CAR= (Tier I+ Tier II) capital/Total risk weighted assets**

### **3.5.3 Liquidity**

One definition of liquidity is a reserve that shields the bank from unanticipated events. In this study, the loans to deposit ratio will be utilized to evaluate CBZ Bank's liquidity:

**Loans Deposit Ratio = Total loans/Total deposit.**

### **3.5.4 Solvency**

Prior to and following the merger with CBZ Building Society, the solvency of CBZ Bank will be evaluated using the solvency ratio. The solvency ratio may be computed using the following formula

**Solvency Ratio = Total Debt/ Total Assets**

## **3.6 Estimation technique and its justification**

To determine the impact of the merger, the average performance of each bank's five post-merger years is compared to the average performance of the pre-merger years. The financial performance of the entities under investigation was analyzed using accounting ratios. Data and information were collected and examined in order to ascertain the relative financial performance for the ratios from the pre-merger era. In the post-merger stage, the combined institution is the focus of analysis. The comparison between the pre-merger average data (m1) and post-merger average data (m2) was used to determine the changes made to the financial performance following the merger or acquisition. Utilizing a multivariate regression analysis, the researcher was able to determine the association between the independent and dependent variables. In order to analyze the data, financial ratios were used

### **3.7 Data and data sources**

Data for this study came from CBZ Bank's audited published annual reports, which covered both the pre- and post-merger periods. The information gathered was utilized to examine how the 2010 merger of CBZ Bank and CBZ Building Society affected the financial performance of the bank. Owing to significant modifications in the operating environment and the accessibility of the latest data for investigation, the examination was restricted to the years 2009–2015.

### **Diagnostic Tests**

Ordinary least squares estimation relies on a number of presumptions. When predetermined assumptions are broken, estimations become skewed and inconsistent. In order to provide robust regression findings, this study ran diagnostic tests to identify instances in which the assumptions have been broken.

#### **3.7.1 Unit root**

Many time series have a trend over time, which means they don't meet the requirements for poor stationery. When non-stationery series are used for estimation, false regression estimates are produced, giving the impression that there is a link between the coefficients even if there isn't one. It has been discovered that unit root tests based on panel data are more thorough than those based on individual time series. The panel-based Fisher-Augmented Dickey Fuller test, which is predicated on a null of the presence of a unit root, was employed in the study.

#### **3.7.2 Multicollinearity**

When there are significant correlations between the independent variables, it is undesirable to have multicollinearity. Hence, the regression findings will not yield accurate results if there is a multicollinearity issue among the independent variables. According to Lewis-Beck and Michael's book *Applied Regression: An Introduction*, a multicollinearity problem is presumed to exist if the correlation between the independent variables is larger than or equal to 0.80. This study uses the same reasoning to characterize strong correlation between the independent variables as the cause of the multicollinearity issue. The correlation matrix is used to examine the multicollinearity issue. We may fairly conclude that there is no multicollinearity among

the independent variables if there is a correlation of less than 0.8 for any of the independent variables.

It is challenging to separate the distinct impacts of independent factors on the dependent variable due to these tight interrelationships, according to Maddala (1977). Severe multicollinearity was identified using the correlation matrix. If a zero-order correlation coefficient is more than 0.8, it is considered strong.

### **3.7.3 Autocorrelation**

Because auto correlation exists in the residuals, statistical conclusions may be deceptive. The Durbin-Watson test was used in the study to check for autocorrelation in time series and to make sure the data in panel-data models is adequate when a significant test result suggests serial correlation is present. If the test's p-value is higher than five percent, it indicates that there may not be any error autocorrelation.

### **3.7.4 Normality (for OLS)**

The normality assumption makes the assumption that the prediction errors follow a normal distribution. The assumption that the sample is representative of a normally distributed population will be tested using the Jarque-Berra statistics (Park, 2002). The null hypothesis that the data have a normal distribution will be tested using the Jarque-Bera statistics, which have an asymptotic  $\chi^2$  distribution with two degrees of freedom. If the residuals are normally distributed, the p-value should be more than 5% and the Jarque-Bea statistic would not be significant (Brooks, 2008).

### **3.7.5 Heteroscedasticity (for OLS)**

Whites' test may be used to determine whether heteroscedasticity is present as well as to look for model misspecification. The test is run with the assumptions that the linear model is accurately defined, there are no missing variables, and there is homoscedasticity in the residuals. The null hypothesis is relevant as a test for heteroscedasticity and model specification since it presumes that the errors are homoscedastic, irrespective of the regressors, and that the model is appropriately described (SPSS user guide).



### **3.7.6 Model goodness of fit (for OLS)**

Predicted values from a well-fitting regression model are in close proximity to the observed data values. In general, if there were no good predictor variables, the mean model—which utilizes the mean for every projected value—would be utilized. Thus, a suggested regression model's fit ought to be superior to the mean model's fit. The R<sup>2</sup> statistic will be used in this study to assess the model's goodness of fit. One helpful feature of R-squared is that its scale makes sense. It has a range of 0 to 1. A value of zero signifies that the suggested model does not yield better predictions than the average model. One denotes an accurate forecast. R-squared rises proportionately when the regression model is improved. R-squared has a drawback in that it may only rise when more factors are included in the regression model. If predictors aren't really enhancing the model's fit, this rise isn't real. To address this, the degrees of freedom in the model are taken into account using a related statistic called Adjusted R-squared.

### **3.7.7 Adjusted R squared statistic**

If adding predictors does not boost model fit and compensates for the lost degrees of freedom, adjusted R-squared will fall. Similarly, if the improvement in model fit is valuable, it will rise as more predictors are included. When using models with multiple predictor variables, adjusted R-squared should always be utilized. It is understood to be the percentage of total variation that the model can account for.

### **3.7.8 Cointegration**

The presence of a long-run equilibrium connection between the variables is tested via cointegration. A unit root test is performed on the error term to carry out the test. There is a long-term link between the variables and the model is made fit for prediction if the variables are cointegrated, which indicates that the error term is stationary. The test will be carried out by the research to determine the nature of the long-term associations between the variables.

### **3.8 Two paired t tests**

Each dependent variable's ratio to the independent variable was compared to determine and evaluate the degree of connection using the statistic t-test and the probability associated with each combination of ratios. An inferential statistic known as a t-test is used to determine if there is a significant difference between the means of two groups, which may be related to certain qualities. This was carried out in order to appraise the financial performance measures and determine the level of significance of the merger and acquisition. By examining the t-test and degree of significance findings, it is possible to demonstrate the relationship between financial performance resulting from mergers and acquisitions.

### **3.9 Data presentation and analysis plan**

In chapter four, data presentation and analysis will take place. Tables will be used in the study to display the regression findings. In order to complement the tables, graphs will also be utilized to illustrate the data. Additionally, the research findings will be interpreted.

### **3.10 Summary**

The research design that was chosen for the study was described at the beginning of the chapter. The model specification that was used to carry out the study was then covered. The model was modified to meet the needs of this investigation while maintaining its original specifications. The chapter described the many data sources that were used for the research. This chapter also examined the rationale behind the variables that were selected from the literature and included a description of the diagnostic tests that will be employed. The data processing, presentation, and interpretation will be covered in the upcoming chapter.

## **CHAPTER IV**

### **PRESENTATION, INTERPRETATION, AND DISCUSSIONS OF FINDINGS**

#### **4.0 Introduction**

This chapter concentrates on the estimation, presentation, and interpretation of the research study findings, guided by the methods described in chapter three. It also provides a thorough examination of how mergers and acquisitions impact Zimbabwe's commercial banks' financial results. The acquired data will be provided, followed by a discussion and the presentation of the regression data's findings.

#### **4.1 Data presentation and analysis**

The average performance of the two premerger years, 2009 and 2010, is compared with the average performance of the five post-merger years, 2011 to 2015, from CBZ Bank's annual audited reports, in order to assess the impact of the merger. The return on asset (ROA) ratio was used in the accounting returns for the assessment of financial performance to show profitability. To find out how the merger affected each of the four variables—profitability, liquidity, solvency, and capital adequacy—regression analysis was used.

#### **Pre and post-merger comparison of performance**

Using data from 2009 to 2015, a comparison of CBZ Bank's financial performance before and after the merger was conducted and is covered below.

##### **4.1.1 Profitability (ROA)**

Using net income produced on each dollar of assets, return on assets was used to evaluate profitability both before and after the merger of CBZ Bank and CBZ Building Society. It was computed as a ratio between Average Total Assets and Net Income, indicating how well the banks used their assets to produce profits. The superior profitability position that results from the merger is indicated by these ratios being greater.

**Table 4.1.1 Return on assets pre and post the merger**

	Before Merger			After Merger						
		%					%			
CBZ BANK	2009	2010	Mean	2011	2012	2013	2014	2015	Mean	Std.
	15.14	18.20	16.67	25.16	27.84	13.15	10.71	14.42	18.25	6.39

Sources: Research Data

The return on assets for CBZ Bank prior to and during the merger are displayed in Table 4.1.1. The average return on assets (ROA) of CBZ prior to and following the merger was 0.1667 and 0.1825, respectively, indicating a rise in ROA. The results align with the investigation conducted by Wanguru (2011) about the impact of mergers and acquisitions on the profitability of commercial banks in Kenya. Five years prior to and following the merger, the banks' profitability was examined by researchers. 33 banks that had combined between 1994 and 2010 were the population that was used.

Return on equity (ROE) and return on asset (ROA) were used to calculate profitability. The results were tallied for the years of research and compared with the findings. It was found that, on average, the company was more profitable during the five years preceding the merger than it was during that time. The researcher came to the conclusion that acquisitions and mergers involving commercial banks boost the profitability of the resulting company.

**4.1.2 Liquidity - Total loan and advance to total deposit ratio.**

Total loan and advance to total deposit ratio were used to measure the liquidity position of CBZ Bank before and after the merger with CBZ Building Society.

**Table 4.1.2 Showing total loan and advance to total deposit ratio.**

	Before Merger			After Merger						
		%					%			
CBZ BANK	2009	2010	Mean	2011	2012	2013	2014	2015	Mean	Std.
	46.43	283.60	165.02	95.71	77.15	68.94	69.48	53.46	72.95	82.84

Sources: Research Data

According to Table 4.1.2, CBZ Bank's average total loan and advance to total deposit ratio was 165.02% prior to the merger with the CBZ Building Society and 72.95% following the merger. This demonstrates that following the merger, the liquidity ratio was lower than it was prior to the merger, and the standard deviation was 0.8284. The findings align with the conclusions made by Carletta (2005), who conducted a model to examine how bank mergers affect the overall liquidity of European banks. They found that major bank mergers tended to raise overall liquidity requirements and, consequently, the central bank's demand for liquidity in monetary operations. They discovered that bank mergers resulted in a decrease in bank liquidity.

#### 4.1.3 Capital adequacy position

One of the components that shows how a bank's financial success is measured is capital adequacy. Depositors are somewhat reassured by the bank's capital position that they will get compensation in the event of a failure. It is preferable when the ratios are greater.

**Table 4.1.3 Capital adequacy position**

	Before Merger			After Merger						
		%					%			
CBZ BANK	2009	2010	Mean	2011	2012	2013	2014	2015	Mean	Std.
	17.40	12.28	14.84	9.47	10.74	13.89	12.09	70.35	23.31	23.17

Sources: Research Data

Prior to the merger, CBZ Bank's average capital adequacy was 14.84%; following the merger, it was 23.31%; the standard deviation was 23,17%. The improvement in the average post-merger indicates that the capital adequacy position of CBZ Bank after the merger with CBZ Building Society was strengthened. This is in line with Saluja's (2012) findings. Saluja et al. (2012) utilized the CAMEL Model (capital adequacy, asset quality, managerial competency, earning quality, and liquidity) to assess the impact of the merger on CBZ Bank's financial performance. The analysis concluded that almost all model parameters showed an improvement in CBZ Bank's financial performance in the post-merger era. In a similar vein, Sharma and Mahima (2012) used the EVA Model to evaluate the merged institutions' financial performance and discovered that mergers had positive long-term effects on capitalization.

#### 4.1.4 Solvency Debt to equity ratio

The long-term solvency status of CBZ Bank was evaluated using the debt to equity ratio both before and after it merged with CBZ Building Society. A greater ratio indicates a bank's use of debt relative to equity, indicating CBZ Bank's poorer solvency situation.

**Table 4.1.4: Debt equity ratio**

	Before Merger			After Merger						
		%				%				
CBZ BANK	2009	2010	Mean	2011	2012	2013	2014	2015	Mean	Std.
	39.15	59.32	49.24	76.41	79.47	92.1	91.71	91.78	86.29	20.00

Sources: Research Data

The average debt to equity ratio in Table 4.1.4, which shows the bank's solvency before and after the merger, was 49.24% and 86.29%, respectively, while the standard deviation was 20% after the merger. This demonstrates that following the merger with CBZ Building Society, the solvency situation improved. This is consistent with the conclusions of Marangu's (2007) study on the impact of mergers and acquisitions on the financial performance of non-listed banks in Kenya, which examined data from both merging and non-combining institutions. The non-merged non-listed banks were selected at random, even though they were formed in the same

period as the combined banks. The analysis discovered that the banks' solvency situation considerably improved after the merger.

## 4.2 Hypothesis testing (t-Test)

### 4.2.1 Paired two Sample t-test for means performance of ROA.

H0: The ROA of CBZ Bank did not significantly change before or after the merger.

H1: The ROA of CBZ Bank differed significantly before and after the merger.

The results of a hypothesis test using the paired t-test statistic to assess the difference between the pre- and post-merger means of the corresponding ratios are displayed in Table 4.2.1. As a result, H0 is rejected and H1, the alternative hypothesis—that there is a significant difference in return on assets after the merger—is accepted. The mean performance of return on assets increased in the post-merger period, and the difference in the pre and post-merger averages ( $\mu_1$  and  $\mu_2$ ) is found statistically significant at the 5% level of significance. t-Stat 2.136 is greater than t-Critical value. Pre-merger ROA and post-merger ROA have a substantial positive association, according to correlation analysis, of 0.532.

Table 4.2.1 t-Test: paired two sample for means ROA

		Pre-merger	Post-merger
Mean		0.1667	0.1825
Variance		0.0028	0.0041
Observations		7.000	7.000
Pearson Correlation		0.352	
t Stat		2.136	
t Critical two-tail		2.306	

Source: Research Data

#### 4.2.2 Paired two sample t-test for mean performance of liquidity

H0: The liquidity of CBZ Bank before and after the merger does not alter significantly.

H1: The liquidity of CBZ Bank before and after the merger differs significantly.

The results of a hypothesis test using the paired t-test statistic to compare the liquidity means performance before and after the merger are displayed in Table 4.2.2. The post-merger liquidity position has declined, and the difference between the pre- and post-merger averages ( $\mu_1=165.02$  and  $\mu_2=72.95$ ) is statistically insignificant at the 5% level of significance. Since t-Stat, or -0.611, is less than t-Critical value, or 1.860, the post-merger liquidity difference is not statistically significant. A correlation study reveals a negligible -0.404 degree of negative correlation.

**Table 4.2.4 t-test: paired two sample for means performance for liquidity position**

		Pre-merger	Post-merger
Mean		1.6502	0.7295
Variance		296.324	261.947
Observations		7.000	7.000
Pearson Correlation		-.404	
t Stat		-0.611	

Source: Research Data

#### 4.2.3 Solvency- Paired two sample t-test for mean performance of D/E ratio.

H0: The D/E ratio of CBZ Bank before and after the merger does not significantly alter.

H1: The D/E ratio of CBZ Bank differed significantly before and after the merger.



The results of a hypothesis test using the paired t-test statistic to compare the pre- and post-merger solvency positions of CBZ Bank, as determined by the D/E ratio, are displayed in Table 4.2.3. The average D/E performance rose in the post-merger period, and at the 5% level of significance, the difference between the pre and post-merger averages ( $\mu_1 = 49.24\%$  and  $\mu_2 = 86.29\%$ ) is judged to be statistically insignificant; t-Stat, or 6.253, is higher than the t-Critical value, or 1.860. D/E ratios have therefore significantly changed following the merger of CBZ Bank and CBZ Building Society. The results of the correlation study indicate a strong, high degree of positive correlation (0.919).

Table 4.2.3 t-test: paired two sample for means performance of D/E ratio

		Pre-merger	Post-merger
Mean		0.4924	0.8629
Variance		0.035	0.04
Observations		7.000	7.000
Pearson Correlation		0.919	
t Stat		6.253	

Source: Research Data

#### 4.2.8 Paired two sample t-test for mean performance of capital adequacy position

H0: The CAR before and after the merger of CBZ Bank does not significantly vary.

H1: The CAR before and after the merger of CBZ Bank differs significantly.

The results of a hypothesis test using the paired t-test statistic to compare CBZ Bank's pre- and post-merger capital adequacy ratio are displayed in Table 4.2.4. The average performance of CAR declined in the post-merger period, and at the 5% level of significance, the difference between the pre and post-merger averages ( $\mu_1 = 0.1484$  and  $\mu_2 = 0.2331$ ) was determined to be

statistically significant. t-Stat, or 2.138, was found to be more than the t-Critical value, or 1.860. Consequently, following the merger, there is a notable change in capital adequacy. A relatively high degree of positive association ( $r = 0.572$ ) has been found through correlation analysis between capital sufficiency before to and following a merger.

Table 4.2.8 t-test: paired two sample for means performance of CAR

		Pre-merger	Post-merger
Mean		0.1484	0.2331
Variance		0.219	0.048
Observations		7.000	7.000
Pearson Correlation		0.572	
t Stat		2.138	

Source: Research Data

### 4.3 Regression analysis

The research used SPSS to perform a spearman correlation test to examine the relationship between the study variables. The degree of relationship between the study variables assessed using ranked data is estimated using the spearman correlation utilizing r values. The results were compared to the degree of connection between the research variables and the spearman table of r values.

#### 4.3.2 Interpretation of person rank correlation range strength

0.00-0.20	Negligible
0.21-0.40	Weak
0.41-0.60	Moderate
0.61-0.80	Strong
0.81-1.00	Very strong

### 4.3.3 Correlation analysis

**Table 4.3.3 showing correlation results between the variables under study**

	TIME PERIOD	PROFITABILITY	CAPITAL ADEQUACY RATIO	LIQUIDITY	SOLVENCY	
Pearson Correlation	TIME PERIOD	1.000	-.352	.572	-.404	.919
	PROFITABILITY	-.352	1.000	-.299	.149	-.144
	CAPITAL ADEQUACY RATIO	.572	-.299	1.000	-.268	.289
	LIQUIDITY	-.404	.149	-.268	1.000	-.290
	SOLVENCY	.919	-.144	.289	-.290	1.000
	TIME PERIOD	.	.219	.090	.184	.002
	PROFITABILITY	.219	.	.257	.375	.379
Sig. (1-tailed)	CAPITAL ADEQUACY RATIO	.090	.257	.	.280	.265
	LIQUIDITY	.184	.375	.280	.	.264
	SOLVENCY	.002	.379	.265	.264	.

### 4.4 Validity and Diagnostic Tests

This segment examined the reliability of the factors that were used to analyze how mergers and acquisitions affected commercial banks' financial results.

#### 4.4.1 Homoscedasticity Test

When the variance of a sample's residuals is uneven throughout a range of measured values, it is known as heteroscedasticity. When doing a regression analysis, heteroscedasticity results in an uneven scatter of residuals (also known as the error term). An outlier in the data set is what causes heteroscedasticity. An observation that deviates significantly from the rest of the sample, either greatly or very little, is called an outlier in heteroscedasticity. Another way to get heteroscedasticity is to exclude variables from the model. The Whites' test was used to determine if the residuals were heteroscedastic. The test may also be used to check for model misspecification because it is carried out under the null of homoscedastic errors and the linear

model is correctly stated, according to SPSS. A significant test statistic indicates if any of the following assumptions have been broken. Given that the test statistic is not significant, the model is homoscedastic. This suggests that the definition of the linear model is also valid.

#### 4.4.2 Multicollinearity Test

The link between the explanatory variables is important in regression analysis. Regression equations including strongly related explanatory variables cannot be combined. The test findings for extreme multicollinearity are shown in table 4.1's correlation matrix. It was concluded that there is no multicollinearity among the explanatory variables using the multicollinearity test. 0.8 as a general guideline (Cameron and Trivedi, 2005). Consequently, the research findings will be effective. Among the appropriate instruments to test for multicollinearity in a dataset are the variance inflation factor (VIF) and the tolerance level (Cohen & Cohen, 2003). According to Landau and Everett (2004), multicollinearity is indicated by tolerance values below 10 and a VIF greater than 10.

There is no association between the predictor variable under consideration and the remaining predictor variables, as shown by variance inflation factors in the range of one. As a result, there was no multicollinearity issue with the data.

#### Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	2005.979	1.446		1387.037	.000					
PROFITABILTY	-48.005	42.053	-.142	-1.142	.372	-.352	-.628	-.135	.903	1.107
CAPITAL ADEQUACY RATIO	2.746	1.285	.279	2.138	.166	.572	.834	.253	.822	1.217
LIQUIDITY	-.201	.330	-.077	-.611	.604	-.404	-.396	-.072	.875	1.142
SOLVENCY	8.588	1.373	.795	6.253	.025	.919	.975	.740	.866	1.155

#### 4.4.3 Cointegration tests

A statistical method for figuring out the short- or long-term correlation between two or more non-stationary time series is called cointegration. The method helps identify long-run

parameters or equilibrium for two or more sets of variables. The obtained findings indicate that the residuals are stationary at the level. The variables show cointegration, which suggests a relationship between them. The variables under investigation have a long-term relationship when cointegration is present. The model's predicted values are therefore long-term statistically and economically reliable.

#### 4.4.4 The F-statistic and Its Interpretation

To determine the overall significance of several independent variables in a model, apply the F-statistic. It contrasts how well two models can account for the variance in the dependent variable. The F-statistics are used to gauge the fitness of the model; an F-statistic of greater than 5 indicates that the model is fit. The research's F-statistic, which is more than 5, was 17.345, indicating that the model may be applied to estimates.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	27.215	4	6.804	17.345	.055
Residual	0.785	2	0.392		
Total	28.000	6			

#### 4.4 Major finding

The major finding of this study are as follows.

1. The average return on assets (ROA) of CBZ Bank before and after the merger is 0.1667 and 0.1825, respectively, according to the descriptive statistics study. This indicates that ROA rose. The Return on Assets ratios before and after the merger had a positive link, according to a correlation study.
2. Prior to the merger, CBZ Bank's average total loan and advance to total deposit ratio was 165.02%; following the merger with the CBZ Building Society, it was 72.95%. This demonstrates that following the merger, the liquidity ratio was lower than it was prior to the merger, and the standard deviation was 0.8284. The computed t-statistic was less than the t Correlation analysis reveals an inconsequential negative weak

correlation of 0.404 between the pre-merger and post-merger liquidity, and critical one-tail tests are not significant at the 1% or 5% significance levels.

3. Prior to the merger, CBZ Bank's average capital adequacy was 14.84%; following the merger, it was 23.31%; the standard deviation was 23,17%. The improvement in the average post-merger indicates that the capital adequacy position of CBZ Bank after the merger with CBZ Building Society was strengthened. The average performance of CAR declined in the post-merger period, and at the 5% level of significance, the difference between the pre and post-merger averages ( $\mu_1 = 0.1484$  and  $\mu_2 = 0.2331$ ) was determined to be statistically significant. t-Stat, or 2.138, was found to be more than the t-Critical value, or 1.860. Consequently, following the merger, there is a notable change in capital adequacy. Correlation analysis shows that there is significant high degree of positive correlation between capital adequacy pre-merger and post-merger of 0.572.
  
4. Prior to and during the merger, CBZ Bank's average debt to equity ratios, which show the bank's soundness, were 49.24% and 86.29%, respectively, and its standard deviation was 20%. This demonstrates that following the merger with CBZ Building Society, the solvency situation improved. The average D/E performance rose in the post-merger period, and at the 5% level of significance, the difference between the pre and post-merger averages ( $\mu_1 = 49.24\%$  and  $\mu_2 = 86.29\%$ ) is judged to be statistically insignificant; t-Stat, or 6.253, is higher than the t-Critical value, or 1.860. As a result, D/E ratios changed significantly following the merger of CBZ Building Society and CBZ Bank. The results of the correlation study indicate a strong, high degree of positive correlation (0.919).

#### **4.4.1 Discussion of findings**

The findings revealed that bank liquidity had deteriorated following the merger between CBZ Bank and CBZ Building Society. Findings are consistent with results of studies by Carletta (2005) who estimated the potential impact of bank mergers on the overall liquidity of European banks. They discovered that significant bank mergers often increased the need for total liquidity, which in turn increased the need for liquidity from the central bank for monetary operations. They found that bank liquidity decreased as a result of bank mergers. According to Shrestha et al. (2017)'s examination of the financial outcomes of banking and financial institutions in Nepal, mergers involving bigger, more stable parties—like commercial banks—have a positive influence on performance in contrast to smaller banking and financial institution mergers. In a different research, Tarila and Ogege (2019) found that a bank's size significantly affects its performance, both before and after a merger

The results show that bank solvency improved as a result of the merger. This findings are consistent with the findings of Marangu (2007) who examined the impact of mergers and acquisitions on the financial performance of non-listed banks in Kenya by analyzing data from both merging and non-combining institutions. The non-merged non-listed banks were selected at random, even though they were formed in the same period as the combined banks. The analysis discovered that the banks' solvency situation considerably improved after the merger. In order to determine whether a bank merger enhances profitability, liquidity, and solvency,

The findings show that profitability improved as a result of the merger between CBZ Bank and CBZ Building Society as show by ROA. This is in line with the studies done by Al-Hroot (2015) examined twelve ratios in his paper Pre- and Post-Merger Impact on Financial Performance: A Case Study of Jordan Ahli Bank. He discovered that 41.67% of the ratios showed a substantial improvement following the merger with Jordan Ahli Bank, whereas 25% (3 ratios) indicated an insignificant improvement. In addition, the merger resulted in a 66.67% improvement in Jordan Ahli Bank's performance, with the exception of 25% (3 ratios) that saw a significant fall and 8.33% (1 ratio) that experienced a slight decline.

The results show that capitalization has improved following the merger in line with studies done by Saluja et al. (2012) who assessed the impact of the merger on HDFC Bank's financial performance using the CAMEL Model (capital adequacy, asset quality, managerial competency, earning quality, and liquidity). The analysis concluded that almost all model parameters showed an improvement in HDFC Bank's financial performance in the post-merger era. In a similar vein, Sharma and Mahima (2012) evaluated the merged institutions' financial performance using the EVA Model and discovered that mergers had positive long-term effects.

#### **4.5 Chapter Summary**

The research study's findings were examined and analyzed in this chapter. The responses received from the respondents regarding the ways in which their MFI operations' financial performance and sustainability are impacted by capital availability, donor funding presence or absence, loan book size, degree of government support, and branch outreach were examined and analyzed in light of the theory presented in Chapter 2. The research study's conclusions, recommendations, and suggested topics for more investigation will all be covered in the upcoming chapter.



## **CHAPTER V**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.0 Introduction**

An overview of the findings on the effect of mergers and acquisitions on the financial performance of commercial banks in Zimbabwe is provided in this chapter. The research makes recommendations for how bank management might enhance the financial performance of the banks after a merger or acquisition based on the conclusions presented in chapter four. The study's goal is taken into consideration while presenting the suggestions, and recommendations for more research are then made.

#### **5.1 Summary of the study**

The purpose of the study was to determine if mergers enhance the financial performance of Zimbabwe's commercial banks. Finding out how mergers affected Zimbabwe's commercial banks' financial performance was the study's main goal. In order to accomplish this research goal, the 2010 merger of CBZ Bank and CBZ Building Society was employed by the researchers. For two years prior to the merger and five years following the merger, information was gathered from the financial statements that were acquired from the yearly audited reports. Both statistical and financial approaches were utilized to analyse the data. Financial tools include ratio analysis; statistical tools for data analysis include mean, standard deviation, correlation, and t-test: Paired Two Sample for Means. From the descriptive statistics analysis mean performance of return on assets before the merger was done.

#### **5.2 Summary of major findings**

The major findings of the research are discussed below:

##### **5.1.1 How mergers and acquisitions have affected Bank liquidity**

Liquidity deteriorated following the merger. This demonstrates that following the merger, the liquidity ratio was lower than it was prior to the merger, and the standard deviation was 0.8284. The findings align with the research conducted by Carletta (2005), who examined the effects of bank mergers on the overall liquidity of European banks. They found that major bank mergers tended to raise overall liquidity requirements and, consequently, the central bank's

demand for liquidity in monetary operations. They discovered that bank mergers resulted in a decrease in bank liquidity.

### **5.1.2. The impact of mergers and acquisitions on the solvency for CBZ Bank**

This demonstrates that following the merger with CBZ Building Society, the solvency situation improved. This is consistent with the conclusions of Marangu's (2007) study on the impact of mergers and acquisitions on the financial performance of non-listed banks in Kenya, which examined data from both merging and non-combining institutions. The non-merged non-listed banks were selected at random, even though they were formed in the same period as the combined banks. The analysis discovered that the banks' solvency situation considerably improved after the merger.

### **5.1.3. How mergers and acquisitions done have affected capitalization**

The improvement in the average post-merger indicates that the capital adequacy position of CBZ Bank after the merger with CBZ Building Society was strengthened. This is in line with Saluja's (2012) findings. Saluja et al. (2012) utilized the CAMEL Model (capital adequacy, asset quality, managerial competency, earning quality, and liquidity) to assess the impact of the merger on CBZ Bank's financial performance. The analysis concluded that almost all model parameters showed an improvement in CBZ Bank's financial performance in the post-merger era.

### **5.14. How mergers impact Bank profitability ((Return on Assets)**

The completed merger led to an improvement in bank profitability. The results align with the investigation conducted by Wanguru (2011) about the impact of mergers and acquisitions on the profitability of commercial banks in Kenya. Five years prior to and following the merger, the banks' profitability was examined by researchers. 33 banks that had combined between 1994 and 2010 were the population that was used. Return on equity (ROE) and return on asset (ROA) were used to calculate profitability.

## **5.2 Conclusion**

Examining the merger's effects on CBZ Bank's financial performance was the goal of this study. The analysis came to the conclusion that there was a considerable rise in Returns on Assets, solvency, and capital adequacy following the merger of the banks based on the facts covered in the previous chapter. The liquidity situation did, however, decline following the transaction. As a result, based on the three factors examined, the combined bank performed better, indicating that mergers enhance financial performance.

## **5.3 Implication and recommendation**

The study's objective was to quantify the effect of mergers on banks' financial performance. Since mergers and acquisitions (M&A) have a big impact on a bank's financial performance, it is crucial for businesses with inadequate profitability, liquidity, and capital structure to think about doing so in order to enhance those areas. The following are the study's recommendations based on its findings:

- It was discovered that bank profitability increased following mergers. If encouraging banks would increase their profitability, then this should be done. A rise in profitability is probably going to help the company's financial success.
- It has been observed that a company's solvency increases following mergers and acquisitions. Businesses should be supported if doing so increases their solvency. An increase in liquidity is probably going to benefit the company's financial success.
- Adequate capital has a big influence on how profitable commercial banks are in Nepal. Bank management is urged to pay adequate attention to capital adequacy in order to increase profitability. Commercial banks can expand their market share and revenue base through mergers and acquisitions, which boosts their profitability. Furthermore, mergers and acquisitions result in a stronger capital adequacy position, enhancing the commercial banks' financial stability.
- The merger led to reduction liquidity which is line with findings of previous studies done.

#### **5.4 Recommendations for further study**

The establishment of mergers and acquisitions faces a number of difficulties. Even though mergers and acquisitions have numerous benefits, there are still reasons why many commercial banks are reluctant to embrace them. Further research is needed to determine these causes.

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## APPENDIX A

### SPSS DATA RESULTS

```

FREQUENCIES VARIABLES=TIME_PERIOD PROFITABILITY CAPITAL_ADEQUACY_RATIO
LIQUIDITY SOLVENCY
  /STATISTICS=RANGE MINIMUM MAXIMUM STDDEV MEAN MEDIAN
  /FORMAT=LIMIT(50)
  /ORDER=ANALYSIS.
    
```

### Frequencies

Notes		
Output Created		03-NOV-2023 09:02:29
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	7
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=TIME_PERIOD PROFITABILITY CAPITAL_ADEQUACY_RATIO LIQUIDITY SOLVENCY /STATISTICS=RANGE MINIMUM MAXIMUM STDDEV MEAN MEDIAN /FORMAT=LIMIT(50) /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.06

[DataSet0]

**Statistics**

		TIME PERIOD	PROFITABILITY	CAPITAL ADEQUACY RATIO	LIQUIDITY	SOLVENCY
N	Valid	7	7	7	7	7
	Missing	0	0	0	0	0
Mean		2012.00	.017801896714	.213502275000	.992528640143	.757068965714
Median		2012.00	.015141244000	.122848576000	.694777397000	.794731784000
Std. Deviation		2.160	.0063974915632	.2316971704209	.8284372018591	.2000934983751
Range		6	.0171339500	.6410655530	2.3717124070	.5294489190
Minimum		2009	.0107056410	.0947420170	.4643175850	.3915764200
Maximum		2015	.0278395910	.7358075700	2.8360299920	.9210253390

**Frequency Table**

**TIME PERIOD**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2009	1	14.3	14.3	14.3
	2010	1	14.3	14.3	28.6
	2011	1	14.3	14.3	42.9
	2012	1	14.3	14.3	57.1
	2013	1	14.3	14.3	71.4
	2014	1	14.3	14.3	85.7
	2015	1	14.3	14.3	100.0
	Total	7	100.0	100.0	

**PROFITABILITY**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0107056410	1	14.3	14.3	14.3
	.0131465380	1	14.3	14.3	28.6
	.0144190470	1	14.3	14.3	42.9
	.0151412440	1	14.3	14.3	57.1
	.0182041640	1	14.3	14.3	71.4
	.0251570520	1	14.3	14.3	85.7
	.0278395910	1	14.3	14.3	100.0
	Total	7	100.0	100.0	



**CAPITAL ADEQUACY RATIO**

	Frequency	Percent	Valid Percent	Cumulative Percent
.0947420170	1	14.3	14.3	14.3
.1073591150	1	14.3	14.3	28.6
.1208563620	1	14.3	14.3	42.9
.1228485760	1	14.3	14.3	57.1
.1388832680	1	14.3	14.3	71.4
.1740190170	1	14.3	14.3	85.7
.7358075700	1	14.3	14.3	100.0
Total	7	100.0	100.0	

**LIQUIDITY**

	Frequency	Percent	Valid Percent	Cumulative Percent
.4643175850	1	14.3	14.3	14.3
.5345939050	1	14.3	14.3	28.6
.6894181210	1	14.3	14.3	42.9
.6947773970	1	14.3	14.3	57.1
.7715065130	1	14.3	14.3	71.4
.9570569680	1	14.3	14.3	85.7
2.8360299920	1	14.3	14.3	100.0
Total	7	100.0	100.0	

**SOLVENCY**

	Frequency	Percent	Valid Percent	Cumulative Percent
.3915764200	1	14.3	14.3	14.3
.5931955690	1	14.3	14.3	28.6
.7640804600	1	14.3	14.3	42.9
.7947317840	1	14.3	14.3	57.1
.9170734480	1	14.3	14.3	71.4
.9177997400	1	14.3	14.3	85.7
.9210253390	1	14.3	14.3	100.0
Total	7	100.0	100.0	

```

REGRESSION
  /DESCRIPTIVES MEAN STDDEV CORR SIG N
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA COLLIN TOL CHANGE ZPP
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT TIME_PERIOD
  /METHOD=ENTER PROFITABILITY CAPITAL_ADEQUACY_RATIO LIQUIDITY SOLVENCY
  /RESIDUALS DURBIN.

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## Regression

### Notes

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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		REGRESSION
		/DESCRIPTIVES MEAN STDDEV CORR
		SIG N
		/MISSING LISTWISE
		/STATISTICS COEFF OUTS R ANOVA
		COLLIN TOL CHANGE ZPP
		/CRITERIA=PIN(.05) POUT(.10)
		/NOORIGIN
		/DEPENDENT TIME_PERIOD
		/METHOD=ENTER PROFITABILITY
	CAPITAL_ADEQUACY_RATIO LIQUIDITY	
	SOLVENCY	
	/RESIDUALS DURBIN.	
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.86
	Memory Required	2324 bytes
	Additional Memory Required for Residual Plots	0 bytes

[DataSet0]

**Descriptive Statistics**

	Mean	Std. Deviation	N
TIME PERIOD	2012.00	2.160	7
PROFITABILTY	.017801897	.0063974916	7
CAPITAL ADEQUACY RATIO	.208898445	.2195932616	7
LIQUIDITY	.992528640	.8284372019	7
SOLVENCY	.757068966	.2000934984	7

**Correlations**

		TIME PERIOD	PROFITABILTY	CAPITAL ADEQUACY RATIO	LIQUIDITY	SOLVENCY
Pearson Correlation	TIME PERIOD	1.000	-.352	.572	-.404	.919
	PROFITABILTY	-.352	1.000	-.299	.149	-.144
	CAPITAL ADEQUACY RATIO	.572	-.299	1.000	-.268	.289
	LIQUIDITY	-.404	.149	-.268	1.000	-.290
	SOLVENCY	.919	-.144	.289	-.290	1.000
Sig. (1-tailed)	TIME PERIOD	.	.219	.090	.184	.002
	PROFITABILTY	.219	.	.257	.375	.379
	CAPITAL ADEQUACY RATIO	.090	.257	.	.280	.265
	LIQUIDITY	.184	.375	.280	.	.264
	SOLVENCY	.002	.379	.265	.264	.
N	TIME PERIOD	7	7	7	7	7
	PROFITABILTY	7	7	7	7	7
	CAPITAL ADEQUACY RATIO	7	7	7	7	7
	LIQUIDITY	7	7	7	7	7
	SOLVENCY	7	7	7	7	7

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	SOLVENCY, PROFITABILTY, LIQUIDITY, CAPITAL ADEQUACY RATIO <sup>b</sup>	.	Enter

a. Dependent Variable: TIME PERIOD

b. All requested variables entered.

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.986 <sup>a</sup>	.972	.916	.626	.972	17.345	4	2	.055	3.525

a. Predictors: (Constant), SOLVENCY, PROFITABILTY, LIQUIDITY, CAPITAL ADEQUACY RATIO

b. Dependent Variable: TIME PERIOD

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.215	4	6.804	17.345	.055 <sup>b</sup>
	Residual	.785	2	.392		
	Total	28.000	6			

a. Dependent Variable: TIME PERIOD

b. Predictors: (Constant), SOLVENCY, PROFITABILTY, LIQUIDITY, CAPITAL ADEQUACY RATIO

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero order	Partial	Part	Tolerance	VIF
(Constant)	2005.979	1.446		1387.037	.000					
PROFITABILITY	-48.005	42.053	-.142	-1.142	.372	-.352	-.628	-.135	.903	1.107
CAPITAL ADEQUACY RATIO	2.746	1.285	.279	2.138	.166	.572	.834	.253	.822	1.217
LIQUIDITY	-.201	.330	-.077	-.611	.604	-.404	-.396	-.072	.875	1.142
SOLVENCY	8.588	1.373	.795	6.253	.025	.919	.975	.740	.866	1.155

a. Dependent Variable: TIME PERIOD

**Collinearity Diagnostics<sup>a</sup>**

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	PROFITABILITY	CAPITAL ADEQUACY RATIO	LIQUIDITY	SOLVENCY
1	1	4.096	1.000	.00	.00	.01	.01	.00
2	2	.573	2.674	.00	.01	.43	.19	.00
3	3	.241	4.120	.01	.06	.32	.66	.02
4	4	.071	7.572	.01	.66	.22	.01	.27
5	5	.018	14.914	.98	.27	.01	.12	.70

a. Dependent Variable: TIME PERIOD

**Residuals Statistics<sup>a</sup>**

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2009.00	2014.99	2012.00	2.130	7
Residual	-.500	.467	.000	.362	7
Std. Predicted Value	-1.409	1.406	.000	1.000	7
Std. Residual	-.799	.746	.000	.577	7

a. Dependent Variable: TIME PERIOD

```
FREQUENCIES VARIABLES=TIME_PERIOD PROFITABILITY CAPITAL_ADEQUACY_RATIO
LIQUIDITY SOLVENCY
  /STATISTICS=RANGE MINIMUM MAXIMUM STDDEV MEAN MEDIAN
  /FORMAT=LIMIT(50)
  /ORDER=ANALYSIS.
```

**Frequencies**

**Notes**

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	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	7
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=TIME_PERIOD PROFITABILITY CAPITAL_ADEQUACY_RATIO LIQUIDITY SOLVENCY /STATISTICS=RANGE MINIMUM MAXIMUM STDDEV MEAN MEDIAN /FORMAT=LIMIT(50) /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.06

**Statistics**

		TIME PERIOD	PROFITABILITY	CAPITAL ADEQUACY RATIO	LIQUIDITY	SOLVENCY
N	Valid	7	7	7	7	7
	Missing	0	0	0	0	0
Mean		2012.00	.017801896714	.213502275000	.992528640143	.757068965714
Median		2012.00	.015141244000	.122848576000	.694777397000	.794731784000
Std. Deviation		2.160	.0063974915632	.2316971704209	.8284372018591	.2000934983751
Range		6	.0171339500	.6410655530	2.3717124070	.5294489190
Minimum		2009	.0107056410	.0947420170	.4643175850	.3915764200
Maximum		2015	.0278395910	.7358075700	2.8360299920	.9210253390

**Frequency Table**

**TIME PERIOD**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2009	1	14.3	14.3	14.3
	2010	1	14.3	14.3	28.6
	2011	1	14.3	14.3	42.9
	2012	1	14.3	14.3	57.1
	2013	1	14.3	14.3	71.4
	2014	1	14.3	14.3	85.7
	2015	1	14.3	14.3	100.0
	Total	7	100.0	100.0	

**PROFITABILITY**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.0107056410	1	14.3	14.3	14.3
	.0131465380	1	14.3	14.3	28.6
	.0144190470	1	14.3	14.3	42.9
	.0151412440	1	14.3	14.3	57.1
	.0182041640	1	14.3	14.3	71.4
	.0251570520	1	14.3	14.3	85.7
	.0278395910	1	14.3	14.3	100.0
	Total	7	100.0	100.0	

**CAPITAL ADEQUACY RATIO**

	Frequency	Percent	Valid Percent	Cumulative Percent
.0947420170	1	14.3	14.3	14.3
.1073591150	1	14.3	14.3	28.6
.1208563620	1	14.3	14.3	42.9
.1228485760	1	14.3	14.3	57.1
.1388832680	1	14.3	14.3	71.4
.1740190170	1	14.3	14.3	85.7
.7358075700	1	14.3	14.3	100.0
Total	7	100.0	100.0	

**LIQUIDITY**

	Frequency	Percent	Valid Percent	Cumulative Percent
.4643175850	1	14.3	14.3	14.3
.5345939050	1	14.3	14.3	28.6
.6894181210	1	14.3	14.3	42.9
.6947773970	1	14.3	14.3	57.1
.7715065130	1	14.3	14.3	71.4
.9570569680	1	14.3	14.3	85.7
2.8360299920	1	14.3	14.3	100.0
Total	7	100.0	100.0	

**SOLVENCY**

	Frequency	Percent	Valid Percent	Cumulative Percent
.3915764200	1	14.3	14.3	14.3
.5931955690	1	14.3	14.3	28.6
.7640804600	1	14.3	14.3	42.9
.7947317840	1	14.3	14.3	57.1
.9170734480	1	14.3	14.3	71.4
.9177997400	1	14.3	14.3	85.7
.9210253390	1	14.3	14.3	100.0
Total	7	100.0	100.0	



