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FACULTY OF COMMERCE

**THE IMPACT OF AUTOMATION ON BANK RECONCILIATION
PROCESSES: A CASE STUDY OF CABS.**

BY

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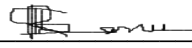
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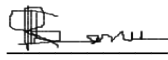
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DEDICATION

To my parents, whose sacrifices instilled in me the value of education, and who carried me through every stage of this academic journey.

ABSTRACT

This study examines the impact of automation on bank reconciliation processes and the resulting effects on cash flow management and financial health at the Central Africa Building Society (CABS) in Zimbabwe, responding to the limited empirical evidence on automated reconciliation within macroeconomically volatile, emerging-market contexts. Anchored on the Technology Acceptance Model, Agency Theory and the Baumol Cash Management Model, which respectively explain the adoption of reconciliation technology, the internal-control rationale for continuous monitoring, and the imperative of optimal liquidity management, the study adopted a mixed-methods case study design in which 50 finance, treasury and IT staff completed structured questionnaires (an 86% response rate) and seven of ten targeted senior personnel were interviewed; quantitative data were analysed descriptively in SPSS Version 27 with reliability confirmed by Cronbach's Alpha (overall $\alpha = 0.912$), while qualitative data were analysed thematically. The findings show that automated reconciliation is approximately 70-85% faster than manual methods, achieves match rates above 99%, and gives real-time visibility of the cash position, which strengthens regulatory compliance, reduces fraud risk and supports institutional solvency; the alternative hypothesis that automation significantly improves the accuracy, efficiency, cash flow management and financial health of bank reconciliation at CABS was accepted across all analytical dimensions. The study recommends that CABS extend automation to branch level, formalise staff training and reconciliation governance policies, and invest in API-based real-time system integration, and it further recommends that future research pursue comparative, multi-institutional studies across Zimbabwean banks and a formal cost-benefit analysis of reconciliation automation to validate and extend these findings beyond a single case study.

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TABLE OF CONTENTS

RELEASE FORM.....	ii
APPROVAL FORM	iii
DEDICATION	iv
ABSTRACT.....	v
ACKNOWLEDGEMENTS	vi
LIST OF TABLES	xi
LIST OF FIGURES	xii
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background to the Study.....	1
1.2 Statement of the Problem.....	3
1.3 Purpose of the Study	3
1.4 Research Question(s)	4
1.5 Statement of the Hypothesis	4
1.6 Significance of the Study	5
1.7 Assumptions.....	6
1.8 Delimitations of the Study	6
1.9 Limitations	7
1.10 Definition of Terms.....	8
1.11 Summary	8
CHAPTER TWO	10
LITERATURE REVIEW	10
2.0 Introduction.....	10
2.1 Purpose of Literature Review	10
2.2 Theoretical Literature.....	11

2.2.1 The Technology Acceptance Model (TAM) and Task-Technology Fit (TTF)	12
2.2.2 Agency Theory and Information Asymmetry	12
2.2.3 The Baumol Cash Management Model and Liquidity Preference Theory	13
2.2.4 Diffusion of Innovation Theory	13
2.2.5 The Resource-Based View of the Firm	14
2.2.6 Towards an Integrated Theoretical Perspective	14
2.3 Empirical Literature	15
2.3.1 The Evolution from Manual to Automated Reconciliation	16
2.3.2 Automation, Operational Efficiency, and Accuracy	17
2.3.4 Financial Health and the Local Banking Context (Zimbabwe)	18
2.3.5 Comparative Regional and International Evidence	19
2.3.6 The Regulatory and Policy Environment Governing Automation in Zimbabwe's Banking Sector	20
2.3.7 Risks, Challenges and Unintended Consequences of Automated Reconciliation	21
2.3.8 Human Capital, Change Management and Organisational Culture	22
2.3.9 Cost-Benefit and Return-on-Investment Considerations	22
2.3.10 Data Quality and Reconciliation Reporting Standards	23
2.3.11 Lessons for CABS from the Reviewed Literature	24
2.4 Conceptual Framework	25
2.5 Research Gap Analysis	27
2.6 Chapter Summary	28
CHAPTER THREE	29
RESEARCH METHODOLOGY	29
3.1 Introduction	29
3.2 Research Design	29
3.3 Subjects (Population and Sampling)	29

3.3.1 Population Target.....	30
3.3.2 Sampling Technique	30
3.3.3 Sample Size.....	31
3.4 Research Instruments	31
3.4.1 Personal Interviews	31
3.4.2 Questionnaires.....	32
3.5 Data Collection Procedures.....	32
3.6 Sources of Data	32
3.6.1 Primary Data	33
3.6.2 Secondary Data	33
3.7 Data Validity and Reliability	33
3.7.1 Data Validity	33
3.7.2 Data Reliability	33
3.8 Data Presentation and Analysis Technique.....	34
3.9 Chapter Summary	34
CHAPTER FOUR.....	35
DATA PRESENTATION, ANALYSIS AND DISCUSSION.....	35
4.0 Introduction	35
4.1 Response Rate Analysis	35
4.2 Reliability Analysis: Cronbach's Alpha Coefficient	36
4.3 Section One: Demographic and Organizational Profile of Respondents.....	37
4.3.1 Gender Distribution.....	37
4.3.2 Role Distribution.....	39
4.3.3 Years of Experience in Finance or Accounting	40
4.3.4 Highest Educational Qualification	41
4.4 Section Two: Current Bank Reconciliation Practices at CABS	42
4.4.1 Frequency of Bank Reconciliation.....	42

4.4.2 Primary Method Used for Bank Reconciliation.....	44
4.4.3 Average Time to Complete One Full Reconciliation Cycle	45
4.4.4 Most Common Types of Discrepancies and Errors	45
4.5 Section Three: Perceptions of Automation and Technology in Bank Reconciliation	47
4.6 Section Four: Impact on Cash Flow Management and Financial Health	49
4.6.1 Reconciliation Issues Experienced in the Past Three Years	52
4.7 Section Five: Barriers, Challenges, and Recommendations	53
4.7.1 Greatest Barrier to Implementing Automated Bank Reconciliation.....	53
4.7.2 Likert Scale — Challenges in Reconciliation Automation.....	55
4.7.3 Additional Recommendations from Respondents.....	55
4.8 Thematic Analysis of Semi-Structured Interview Responses.....	56
4.9 Trend Analysis: Estimated Progression of Reconciliation Key Performance Indicators.....	59
4.10 Discussion of Findings in Relation to Research Objectives and Hypotheses.....	61
4.10.5 Hypothesis Testing.....	64
4.11 Chapter Summary	65
CHAPTER FIVE.....	67
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.....	67
5.1 Summary	67
5.2 Conclusions.....	67
5.3 Recommendations.....	69
5.4 Chapter Summary	70
REFERENCES.....	72
APPENDICES	77
TURNITIN REPORT	Error! Bookmark not defined.

LIST OF TABLES

Table 4.1 Summary of Research Instrument Response Rates.....	36
Table 4.2 Cronbach's Alpha Reliability Statistics by Scale (SPSS Output).....	37
Table 4.3 Gender Distribution of Questionnaire Respondents.....	37
Table 4.4 Distribution of Respondents by Current Role/Position.....	39
Table 4.5 Distribution of Respondents by Years of Experience.....	40
Table 4.6 Distribution of Respondents by Highest Educational Qualification.....	41
Table 4.7 Frequency of Bank Reconciliation at CABS.....	42
Table 4.8 Primary Bank Reconciliation Method Employed.....	44
Table 4.9 Average Time to Complete One Full Reconciliation Cycle.....	45
Table 4.10 Most Common Discrepancy and Error Types Encountered.....	45
Table 4.11 Descriptive Statistics-Automation and Technology Scale.....	47
Table 4.12 Descriptive Statistics-Cash Flow Management and Financial Health Scale.....	50
Table 4.13 Reconciliation - Related Issues Experienced at CABS in the Past Three Years.....	52
Table 4.14 Greatest Barriers to Implementing Automated Bank Reconciliation.....	53
Table 4.15 Challenges to Automation-Likert Scale Responses.....	55
Table 4.16 Thematic Summary of Open-Ended Reconciliation.....	55
Table 4.17 Estimated Trend in CABS Reconciliation Performance Indicators (2020-2024).....	60

LIST OF FIGURES

Figure 2.1 Conceptual Framework Diagram Showing Independent, Dependent and Moderating Variables.....	26
Figure 4.1 Pie Chart-Gender Distribution of Response.....	38
Figure 4.2 Bar Chart-Distribution of Respondents by Role.....	39
Figure 4.3 Pie Chart-Educational Qualification Distribution.....	41
Figure 4.4 Bar Chart-Frequency of Bank Reconciliation at CABS.....	42
Figure 4.5 Bar Chart-Mean Scores for Automation Perception.....	48
Figure 4.6 Bar Chart-Mean Scores for Cash Flow and Financial Health.....	50
Figure 4.7 Pie Chart-Greatest Barriers to Automation Implementation.....	54
Figure 4.8 Line Graph-Estimated Reconciliation Efficiency Implement Trends (2020-2024).....	60

CHAPTER ONE

INTRODUCTION

Chapter One introduces the study by outlining the context, problem, and rationale for investigating the automation of bank reconciliation at the Central Africa Building Society (CABS). It presents the background to the study, situating bank reconciliation within the wider evolution of financial management practice and the particular economic conditions prevailing in Zimbabwe, before articulating the statement of the problem that the research seeks to address. The chapter proceeds to set out the purpose of the study and its specific objectives, the research questions that guide the inquiry, and the hypothesis that will be tested. It further defines the significance of the study to key stakeholders, states the assumptions underlying the research, and delineates the delimitations and limitations within which the study was conducted. The chapter concludes with a definition of key terms used throughout the dissertation and a summary that draws together the foundational elements upon which the subsequent chapters, namely the literature review, methodology, data presentation and conclusions, are built.

1.1 Background to the Study

Bank reconciliation is an accounting process by which a business compares its cashbook entries to bank statements to identify and explain anomalies (Weygandt, Kimmel, & Kieso, 2020). Such procedure was traditionally conducted manually, in which ledger entries were reconciled against deposit slips, bank statements and cheque registers. Although manual reconciliation is an essential process to prevent mistakes and fraud and ensure the correctness of cash balances, it can often be time-consuming and tedious, and prone to human error, especially for the companies with high volume of transactions. Even so, owing to the advent of new technology, In particular automation and accounting software, bank reconciliation can be much improved both about accuracy and efficiency. When algorithms are used to automatically reconcile

transactions, identify inconsistencies and generate reconciliation reports, the amount of manual effort is largely reduced. As a result, more accurate and timely reconciliations can be conducted to ensure effective cash flow management, internal controls and financial reporting, and aid efficient decision making (Bragg, 2021). The present research attempts to explore such benefits given the real impact of automated bank reconciliation on the financial institution "CABS" as a case study.

The trajectory of bank reconciliation practice in Zimbabwe cannot be separated from the turbulent history of the country's financial sector. During the hyperinflationary period of the late 1990s and 2000s, which culminated in the effective abandonment of the Zimbabwean dollar in 2009, financial institutions operated under conditions of extreme currency instability, and reconciliation of accounts, where it was performed at all, was frequently overtaken by the pace of price and exchange-rate changes before it could be completed (Chikoko, 2024). The subsequent adoption of a multi-currency regime restored a measure of stability and prompted banks, including CABS, to begin replacing purely manual, paper-based ledger reconciliation with early computerised spreadsheet systems, although these remained largely manual in the sense that data still had to be extracted, entered and matched by hand.

From the early 2010s onward, the growth of the Real Time Gross Settlement (RTGS) system, the proliferation of mobile money platforms, and the broader digitalisation of the National Payment System by the Reserve Bank of Zimbabwe (RBZ) dramatically increased the volume and velocity of transactions passing through CABS and other building societies (Mabhandu, 2022). This growth in transaction volume exposed the limits of manual and semi-manual reconciliation: back-office staff who had previously reconciled a few hundred entries a day found themselves confronted with thousands of RTGS transfers, mobile-money settlements and point-of-sale entries, each of which had to be matched individually against bank statements. The reintroduction of a local currency, first as bond notes and later as the Zimbabwe Gold (ZiG) currency in April 2024, added a further layer of complexity, as institutions had to reconcile balances across multiple currency denominations simultaneously while managing translation and revaluation entries (RBZ, 2024).

It was against this backdrop of rising transaction volumes, currency transition and heightened regulatory scrutiny that CABS, like many of its peers, began to explore Robotic Process Automation (RPA) and Application Programming Interface (API) based reconciliation tools as a means of coping with a workload that had outgrown the

capacity of manual processes. However, the adoption of these tools has been uneven and partial, with some functions automated while others, particularly at branch level, continue to rely on manual verification. This uneven, incomplete transition from manual to automated reconciliation, occurring within a uniquely volatile economic environment, is the specific set of events and circumstances that gives rise to the problem investigated in this study.

1.2 Statement of the Problem

Despite the fact that bank reconciliation is considered a crucial process, several organizations (including financial institutions like CABS) still face challenges with manual or semi-manual bank reconciliation methods, which may cause them errors and inefficiencies. Some of these challenges involve the delay in detecting that something is not right, as in wrong posting, unrecorded transactions, or bank mistakes, which could reveal that the actual cash situation is different. Manual reconciliation also renders the company vulnerable to fraud – because weak internal controls make it more likely that frauds go undetected for a longer time. Also, a large amount of time is spent by accounting staff on manual reconciliation which takes them away from more strategic financial planning and analysis. Poor cash balance data through reconciliation errors can lead to less accurate cash flow projections, potentially causing liquidity issues or missed investment opportunities. Lastly, errors or omissions made in the financial reporting of the company may not be detected during the reconciliation process which may lead to material misstatements. This study aims to explore the solution to these issues with the introduction of automation in bank reconciliation process in the context of CABS.

1.3 Purpose of the Study

This study's main goal is to investigate how bank reconciliation procedures might be made more accurate and efficient through automation. Its specific objectives are to:

- Evaluate CABS's bank reconciliation procedures as they are right now.

- Analyze how the accuracy and efficiency of CABS's reconciliation processes are affected by the implementation or improvement of automated bank reconciliation systems.
- Examine the ways in which automated bank reconciliation enhances CABS's overall financial health and cash flow management.

1.4 Research Question(s)

The following research questions are going to develop the framework of this study:

- What are the present difficulties and inefficiencies related to CABS's manual or semi-manual bank reconciliation procedures?
- How much might automation increase the effectiveness of bank reconciliation at CABS (for example, by reducing time and effort)?
- In what ways does automation improve bank reconciliation accuracy, particularly with regard to error identification and discrepancy resolution at CABS?
- What effects does automated bank reconciliation have on CABS's cash flow management, particularly the precision of cash forecasts and the placement of liquidity?
- How does CABS's overall financial stability and internal control environment benefit from automated bank reconciliation's increased accuracy and efficiency?

1.5 Statement of the Hypothesis

Null Hypothesis (H_0): The effectiveness, precision, cash flow management, and financial stability of CABS's bank reconciliation procedures are not significantly affected by automation.

Alternative Hypothesis (H_1): Automation significantly improves the accuracy, efficiency, cash flow management, and financial health of CABS's bank reconciliation procedures. This hypothesis will be tested through analysis of Likert-scale survey data and statistical measures including Cronbach's Alpha coefficients and mean score thresholds.

1.6 Significance of the Study

This research holds significance for three principal groups of stakeholders, namely the researcher, the university, and policy makers, each of whom stands to benefit differently from its findings.

To the Researcher

For the researcher, this study provides a practical opportunity to apply banking and finance theory acquired during undergraduate study to a live, institution-specific problem, deepening technical competence in reconciliation processes, financial data analysis and mixed-methods research while fulfilling the requirement for the Bachelor of Commerce Honours Degree in Banking and Finance. The process of designing instruments, engaging CABS staff and interpreting SPSS output builds professional skills in accounting technology and financial analysis that are directly transferable to a career in banking, reconciliation and financial control.

To the University

For the university, the study contributes to the existing body of academic knowledge on financial technology adoption in emerging markets and provides a documented, institution-specific case study that can serve as a reference and teaching resource for future students researching automation, internal controls or financial technology in the banking sector. It also strengthens the university's links with the banking industry through the collaborative access granted by CABS, which may support future research partnerships and internship placements for students in the Department of Banking and Finance.

To Policy Makers

For policy makers, including the Reserve Bank of Zimbabwe and the Bankers Association of Zimbabwe, the findings offer empirical evidence on the extent to which automation strengthens internal controls, regulatory compliance and financial stability at an institutional level, which can inform the design of supervisory guidelines, digital-transformation policy and minimum technology standards for banks and building societies operating in Zimbabwe's unique macroeconomic environment. The study also provides a reference point for assessing the resilience of the banking sector's back-office

infrastructure to the currency and liquidity shocks that have characterised Zimbabwe's recent economic history.

1.7 Assumptions

This research is based on the following assumptions, which are held as given for the purposes of this study:

- **Data Availability:** It is assumed that CABS will make relevant historical and current data regarding its cash flow statements, transaction volumes, bank reconciliation procedures, and financial health indicators available for analysis.
- **Representativeness:** It is assumed that CABS's selected reconciliation procedures and data are reasonably representative of common banking operations and challenges within its operational scope.
- **Functionality of Automation Tools:** Where specific automation tools are assessed, it is assumed that they function as intended and can be installed in the bank's current IT infrastructure or with appropriate adjustments.

1.8 Delimitations of the Study

This research is confined to the following aspects. The study focuses in particular on the bank reconciliation procedure and its impact at CABS, instead of giving a detailed analysis of all the CABS accounting procedures. The analytical and empirical data primarily will come from CABS and care will be taken to not overstate conclusions to other institutions. The scope of the study will be a specific time period for which data will be collected and analyzed, typically before and after the implementation or enhancement of automated reconciliation. The study will focus on practical automation solutions for bank reconciliation, including automated bank statement matching, exception reporting, and other functions in an accounting or treasury management system. Other types of account reconciliations will not be discussed in great detail unless they relate to bank reconciliation.

These delimitations were deliberately chosen to keep the study feasible within the time, financial and access constraints of an undergraduate dissertation. Restricting the analysis to CABS, rather than surveying multiple banks, was necessary because meaningful data on internal reconciliation practices could only be obtained with the

cooperation and confidentiality assurances of a single willing institution; attempting a multi-bank study would have required separate ethical clearances and data-sharing agreements that were not practically attainable within the research timeline. Similarly, confining the study to a defined time period and to the specific automation functions of bank statement matching and exception reporting, rather than the full spectrum of accounting reconciliations, allowed the research instruments to remain focused and manageable for respondents, thereby improving the quality and completion rate of the questionnaires and interviews. These choices were therefore driven by considerations of practicality, ethical access and analytical depth rather than by a lack of interest in the wider reconciliation landscape.

1.9 Limitations

This study encountered several practical limitations that are specific to researching a live, regulated financial institution. Because CABS handles confidential customer and transactional data, access to certain reconciliation records and system logs was restricted by the bank's data-protection and confidentiality protocols, which meant the researcher relied largely on staff-reported figures and anonymised summary statistics rather than raw transaction-level data. The use of convenience sampling within a single institution means the findings, while detailed, cannot be statistically generalised to all banks or building societies in Zimbabwe, particularly those with different sizes, core banking systems or regulatory classifications. Some respondents, especially those in IT and treasury, were reluctant to discuss system vulnerabilities or past reconciliation failures in detail for fear of reputational or disciplinary consequences, which may have led to some understatement of the challenges associated with automation. The cross-sectional nature of the data collection, conducted over a limited number of weeks, also means the study captures a snapshot of CABS's reconciliation practices rather than their evolution over time, so seasonal or year-end variations in transaction volume and reconciliation workload were not fully captured. Finally, because financial automation technology and Zimbabwe's regulatory and currency environment continue to change rapidly, including the transition to the ZiG currency, some of the specific tools and figures discussed in this study may require updating as CABS and the broader banking sector continue to evolve.

1.10 Definition of Terms

Automation: Using technology, such as software and algorithms, to automate tasks that were previously done by hand, often faster and more accurately. In this context, it means automated bank reconciliation software or options in banking systems (Bragg, 2021).

Bank Reconciliation: Reconciliation and documentation of the differences between the cash transactions as recorded in a company's books of account and the cash transactions as reported by its bank (Weygandt, Kimmel & Kieso, 2020).

Efficiency: (In Bank Reconciliation) is the speed and resource utilization (time, labour, cost) used in the bank reconciliation process (Saunders & Cornett, 2019).

Accuracy (Bank Reconciliation): The degree of correctness of the cash balance, timely identification, and resolution of discrepancies, and no errors or omissions in the bank reconciliation (Bragg, 2021).

Cash Flow Management: The process of watching, analyzing and optimizing the net amount of cash and cash equivalents available to an organization, including the management of cash flows to meet financial obligations and strategic goals (Van Horne & Wachowicz, 2009).

Financial Health: A complete evaluation of a company's financial health that includes its capacity to generate income, cover debts, remain solvent, and reach its long-term financial goals (Bodie, Kane & Marcus, 2021).

CABS (Central African Building Society): This is the specific financial institution that has been chosen to be the case study in this research being located in Zimbabwe's financial services.

1.11 Summary

By using a case study of CABS this dissertation will evaluate the ground breaking potential impact of automation on bank reconciliation processes, focusing on the effects on accuracy efficiency cash flow management and overall financial health. The research

identifies the potential advantages for automation and the disadvantages for manual reconciliation. The research will try to determine the extent of automation's impact on these key financial activities through an analytical approach that involves a systematic study of the assessment of automated solutions, analysis of financial data and analysis of the current processes at CABS. Findings should provide useful insight for CABS and other financial institutions seeking to optimize their financial processes and improve their position. Specific research questions and a solid hypothesis will be specified and issues faced when conducting a case study will be examined.

Ethical considerations were treated as central to the design and conduct of this research throughout. Formal written permission to conduct the study was obtained from CABS management before any data collection began, and all questionnaire and interview participants were given an information sheet explaining the purpose of the research, after which they provided informed consent prior to participating. Participation was entirely voluntary, and respondents were informed of their right to withdraw from the study at any point without penalty. Anonymity and confidentiality were maintained by coding respondents' data and by ensuring that no individual names, account details or customer information were recorded or reported in the dissertation; only aggregated, anonymised findings are presented in Chapter Four. Interview recordings and completed questionnaires were stored securely and used solely for the purposes of this academic study, in line with the ethical guidelines of Bindura University of Science Education and the data-protection principles established under Zimbabwe's Cyber and Data Protection Act (Government of Zimbabwe, 2021).

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

One of the basic evolutionary change in modern monetary administration is its transition from archaic, manual accounting systems to one of current sophisticated and automated monetary systems. Bank reconciliation is incorporated into the internal control process, which is designed to assist in the methodical oversight of the consistency of the financial information of an organization with the transactional data on the bank statements (ACCA, 2024). In the past, this process was a very long back office, manual process that was at times exposed to internal frauds, intellectual tire and human mistakes. Still, current developments of Financial Technology (FinTech) and the Robotic Process Automation (RPA) has revolutionized this space, providing for continuous, fast, and machine-generated reconciliation (ACCA, 2024). For financial institutions, mainly building societies, commercial banks, cash flow management, day to day bank reconciliation is a classic area of financial health & wellness.

It's not just 'being in order'. In particular in a situation with macro economies instability, such as Zimbabwe, where exchange rates are fluctuating, monetary policies are being changed and inflation rates are changing, it is useful to have a real time understanding of cash on hand. This review available report considers the association between automation of accounting and speed & precision of bank reconciliation, then downstream effects of this practice on cash flow management & financial health. This literature brings the academic background for preparing the CABS thorough case, evaluating existing theoretical structures, and analyzing the empirical research over recent years.

2.1 Purpose of Literature Review

The main goal of this literature review is to explore, examine, and evaluate existing research on the automation of bank reconciliation and the effects of bank reconciliation

automation on institutional stability and corporate financial management. To assist with the focus and objective of the CABS case study the specific objectives are to: develop and evaluate the theoretical frameworks supporting the need for internal controls, the factors driving the adoption of new technologies and the basic concepts of liquidity management; compare automated systems and traditional manual systems and assess the empirical evidence on the impact of automation on operational efficiency, speed and reliability; assess the direct and indirect connections between proactive cash flow management and regular and accurate bank reconciliations; address the particular circumstances associated with liquidity management and financial health in the financial services sector in Zimbabwe; and identify gaps in the existing body of knowledge, particularly in relation to regional studies in the banking sector in Zimbabwe.

In pursuing these objectives, the review deliberately draws on literature published across a combination of peer-reviewed journal articles, institutional and regulatory reports, and recent postgraduate and professional research sourced through Google Scholar and university repositories, so as to capture both the rigorous theoretical grounding available in the accounting and finance literature and the practical, context-specific insights available in industry and regulatory publications. Preference is given, wherever possible, to sources published within the last five years, so that the review reflects the current state of automation technology, Zimbabwe's evolving currency and regulatory environment, and contemporary scholarly debate on financial digitalisation, while foundational theoretical works are retained where they remain the most authoritative statement of the underlying theory. The review is structured to move systematically from theory to empirical evidence: it begins by establishing the theoretical lenses through which automation and reconciliation can be understood, proceeds to examine empirical evidence at the local, regional and international levels, and concludes by drawing the theoretical and empirical strands together into the conceptual framework and research gaps that justify and orient the remainder of this dissertation.

2.2 Theoretical Literature

The study primarily drew on five theories so as to evaluate fully the impact of automated bank reconciliation on the financial health. Theories demonstrate the importance of

proper financial control, the organizational aspects of technology's adoption, the strategic use of technology, the basics of liquidity management, and the sustained competitive advantage.

2.2.1 The Technology Acceptance Model (TAM) and Task-Technology Fit (TTF)

The transition from human reconciliation to automated feeds is governed by the Technology Acceptance Model (TAM) as proposed by Davis (1989) and continually adapted in the current FinTech literature, which in fact is a technology adoption problem (Chitungo & Munongo, 2021). TAM suggests that the value and ease of use of a new financial system affect the introduction of the system. Task-Technology Fit (TTF) enhances TAM in the context of automated reconciliation systems (for example, those connected with Temenos T24 or Sage Pastel, which are often used in Zimbabwe) by maintaining that the software must precisely match the particular requirements of the activity. On the one hand, there are Electronic Banking Internet Communication Standard (EBICS) protocols, and on the other hand, there are Application Programming Interfaces (APIs) to access the data easily. With an institution such as CABS, which has highly transactional requirements, the acceptance rate of the technology increases, directly contributing to operational efficiency (Mabhanda, 2022).

2.2.2 Agency Theory and Information Asymmetry

Jensen and Meckling (1976) have made an important contribution in the form of Agency Theory which comes with a critical outlook for evaluating the governance role of bank reconciliation. In large financial institutions, the ownership (shareholders) and the control (management) are separated. Manual reconciliation usually leads to a delay of information of weeks or even months, allowing the time for the development of “agency costs” (fraud, embezzlement or managerial negligence) to occur (Appiah et al., 2022). Automated reconciliation is a continuing, real-time auditing system. Automation eliminates the information asymmetry by flagging any discrepancies, unmatched transactions or unauthorized disbursements immediately. This guarantees consistency between the data reported to the stakeholders and that of regulatory authorities like the Reserve Bank of Zimbabwe (RBZ) and the reality of the bank's cash position.

2.2.3 The Baumol Cash Management Model and Liquidity Preference Theory

Zivanai and Sibanda (2021) refer to the Baumol Model of Cash Management which states that it is essential for businesses to have optimal cash balances to ensure that they have the cash they need to meet their transactional needs while avoiding the possession of idle cash which does not generate value. In the Zimbabwean economy, with hyperinflationary and multi-currency conditions being commonplace, it is crucial to keep cash balances at optimum levels in order to survive. With automated banking, treasury departments are able to have intra-day visibility, so they can better estimate the cash flow needs for the short-term, optimize overnight investments, and ensure the liquidity ratio they need to comply with regulations.

2.2.4 Diffusion of Innovation Theory

Beyond TAM and TTF, the Diffusion of Innovation (DOI) framework offers a complementary lens for understanding how automated reconciliation technologies spread within, and across, financial institutions. Applying DOI to Southern African banking automation, Marufu and Chinyerere (2024) argue that the rate at which an innovation such as robotic process automation (RPA) is adopted depends on five perceived characteristics: relative advantage, compatibility, complexity, trialability and observability. In the context of bank reconciliation, the relative advantage of automated matching over manual "tick and tie" methods is readily demonstrable through measurable reductions in processing time and error rates, which accelerates adoption once early results are visible to staff and management. Compatibility is similarly favourable where automation tools can be layered onto an institution's existing core banking system, such as Temenos T24, without requiring a full system replacement, whereas perceived complexity, particularly among long-serving staff accustomed to manual processes, can slow adoption unless accompanied by adequate training. Marufu and Chinyerere (2024) further distinguish between innovators and early adopters, who tend to be concentrated in treasury and IT functions, and the late majority and laggards, who are more often found in branch-level operations, a pattern that is consistent with the uneven, partial automation described in the background to this study. DOI theory therefore helps to explain not merely whether automation is adopted, but the internal organisational sequence and pace at which it diffuses through different departments of

an institution such as CABS, which has direct implications for how change management and training programmes should be sequenced and targeted.

2.2.5 The Resource-Based View of the Firm

The Resource-Based View (RBV) provides a strategic-management perspective on why investment in reconciliation automation may yield a sustained competitive advantage rather than merely an operational efficiency gain. Gumbo and Museva (2022) apply RBV to Zimbabwean financial institutions, arguing that automation capabilities, comprising the software, integrated data infrastructure and specialised staff competencies required to operate them, can constitute a valuable, rare and difficult-to-imitate organisational resource when they are deeply embedded in an institution's processes and culture. Where a building society such as CABS is able to combine automated reconciliation with reliable IT infrastructure and digitally literate staff, the resulting capability is not easily replicated by competitors facing infrastructural constraints such as unreliable electricity supply or limited technical skills, and can therefore translate into a durable advantage in operational efficiency, regulatory compliance and customer trust. Gumbo and Museva (2022) caution, however, that automation technology alone does not constitute a strategic resource; its value is realised only when combined with complementary organisational resources, including governance structures, staff training and a culture of continuous process improvement, echoing the moderating variables identified in the conceptual framework of this study. The RBV therefore reinforces the rationale for treating automation not simply as a cost-saving tool but as a component of CABS's broader competitive positioning within Zimbabwe's financial services sector.

2.2.6 Towards an Integrated Theoretical Perspective

Read together, the five theoretical perspectives reviewed in this chapter are complementary rather than competing, and each contributes a distinct layer of explanation to the phenomenon under investigation. The Technology Acceptance Model and Task-Technology Fit explain the individual-level decision of CABS staff to accept and use reconciliation automation, focusing on perceived usefulness, ease of use and the degree of fit between the technology and the reconciliation task itself. Diffusion of Innovation theory extends this individual-level explanation to the organisational

level, describing how adoption spreads unevenly across departments and over time, which directly accounts for the partial, department-by-department pattern of automation observed at CABS. Agency Theory shifts the focus from adoption to control, explaining why automated reconciliation is valuable as a monitoring mechanism that reduces the information asymmetry between those who initiate transactions and those charged with safeguarding institutional assets, thereby linking automation directly to internal governance and fraud risk. The Baumol Cash Management Model provides the financial-management logic that connects improved reconciliation accuracy and timeliness to tangible treasury outcomes, namely more precise cash positioning, reduced idle balances and lower transaction costs of moving between cash and short-term investments. The Resource-Based View, finally, elevates the discussion from operational and financial outcomes to strategic positioning, framing automation capability, when combined with governance and skills, as a source of sustained competitive advantage rather than a purely tactical efficiency measure.

This integrated theoretical perspective directly informs the conceptual framework presented in Section 2.4: the independent variable, automated bank reconciliation, is adopted and diffused through the mechanisms described by TAM, TTF and DOI; it exerts control and monitoring effects consistent with Agency Theory; it is expected to influence cash flow and financial health outcomes through the logic of the Baumol model; and its ultimate strategic value to CABS is best understood through the lens of the Resource-Based View. The moderating variables identified in the conceptual framework, staff digital literacy, internal control and governance, and IT infrastructure reliability, likewise correspond closely to the conditions each theory identifies as necessary for its predicted effects to materialise: TAM and DOI both emphasise user readiness and organisational context, Agency Theory emphasises governance quality, and the Resource-Based View emphasises the complementary organisational resources without which a technological capability cannot be converted into sustained advantage. This theoretical integration therefore provides the analytical scaffolding for the empirical literature reviewed in the remainder of this chapter, and for the data presented and discussed in Chapter Four.

2.3 Empirical Literature

Recent research can be broken down into a number of aspects which are fully explained below.

2.3.1 The Evolution from Manual to Automated Reconciliation

Traditionally, an accountant would need to manually reconcile the internal cash books and actual bank statements using a "tick and tie" approach to bank reconciliation. Because of the natural, retrospective nature of the process, which was frequently done at the end of the month, management made financial decisions on the basis of facts of the past, not the present. The new approach brought about by RPA (Robotic Process Automation) and API (Application Programming Interface) is highlighted by recent empirical investigations. This study by CIMA (2023) illustrates that organisations transitioning from manual spreadsheets to automated matching algorithms experienced a paradigm shift in the accounting function from being reactive and correcting errors to being proactive and analysing finances.

This evolution can usefully be understood as passing through three broad generations of technology. The first generation, still found in parts of CABS's branch network, consists of wholly manual reconciliation performed with paper statements, ledger books or, at best, general-purpose spreadsheet software such as Microsoft Excel, in which every match between the cash book and the bank statement is identified and entered by a human operator. The second generation, semi-automated reconciliation, introduces rule-based matching software or macro-driven spreadsheets capable of automatically matching transactions that meet exact, pre-defined criteria such as identical amount, date and reference number, while routing any transaction that does not meet these criteria to a human reconciler for manual investigation; this is the level of automation most widely reported by CABS respondents in Chapter Four. The third and most advanced generation, fully automated or intelligent reconciliation, employs machine-learning and fuzzy-matching algorithms capable of recognising near-matches, such as transactions recorded with minor timing differences or truncated reference numbers, without requiring a human reconciler to intervene except for genuinely anomalous exceptions, and increasingly incorporates real-time API connectivity that allows reconciliation to occur continuously rather than at scheduled batch intervals. Understanding CABS's current position within this three-generation continuum, rather than treating automation as a simple binary of "manual" versus "automated", is essential

to interpreting both the empirical findings presented in Chapter Four and the recommendations developed in Chapter Five, since the appropriate next step for the institution is to progress specific, still-manual functions to the second or third generation rather than to pursue automation as an undifferentiated, one-off project.

2.3.2 Automation, Operational Efficiency, and Accuracy

A plethora of regional and international empirical studies illuminate the real-world benefits of automation. An ACCA (2024) global report on industry notes that automating financial reporting and recon would save 70% to 85% of the processing time. In addition, machine learning algorithms can almost completely eradicate transfer errors, which can take hours of human deduction to match the complex large-scale operations.

A quantitative study conducted by Chikoko (2024) in the region focused on building societies and commercial banks in Southern Africa, highlighting the ability of automated matching algorithms to accurately process a vast volume of multiple transactional data including mobile money transfers, RTGS and cross-border remittances, at more than 99% accuracy. This efficiency translates to cost savings in operation. The significant improvement in labor hours previously spent on manual reconciliation allows institutions to free up human resources for more valuable tasks like risk management, credit analysis, and strategic forecasting, as noted by Mhlanga (2022). However, challenges related to the implementation of the research were also highlighted; Ndlovu and Mapfumo (2023) indicated that human resistance to new technology, software integration issues with existing core banking systems, and the upfront investment costs can often exceed the gains from improved efficiency during the transition period.

Taken together, these efficiency and accuracy findings suggest that the benefits of automation documented in the international and regional literature are not automatic but conditional on the quality of implementation. Institutions that combine automated matching with adequate system integration, sufficient staff training and realistic implementation timelines tend to realise efficiency gains close to the 70-85% processing-time reduction reported by ACCA (2024), whereas institutions that rush implementation without addressing legacy system-integration issues, as flagged by Ndlovu and Mapfumo (2023), often experience a temporary dip in efficiency during the

transition period before the anticipated gains materialise. This distinction between the theoretical potential of automation and its realised benefit in practice is directly relevant to CABS, where the data presented in Chapter Four shows a similarly uneven pattern of efficiency gains across departments, reinforcing the view that the technology itself is necessary but not sufficient, and that the manner and completeness of its implementation is what ultimately determines whether the accuracy and efficiency benefits documented in the literature are fully achieved.

2.3.3 Impact of Regular Reconciliation on Cash Flow Management

Empirical studies show that regular and accurate bank reconciliation is significantly and always related to improved Cash Flow Management. Nyoni and Makoni (2025) found a positive relationship between the reduction in working capital cycle and the daily automated reconciliations for financial institutions and large organizations. Businesses using the traditional method of matching their internal cash books to bank statements at the end of the month had 45% higher risk of experiencing a technical liquidity crisis compared to those using direct bank API feeds to match their cash books intra-day and automatically.

Regular recon enables treasury to see fraudulent withdrawals, uncleared deposits, unpresented cheques and unexpected bank charges in a flash. Cash forecasting in the near future depends on this accessibility. According to Smith and Ndlovu (2022), the capacity to verify accurate settlement cash positions on a daily basis keeps institutions from using costly overdraft facilities unnecessarily or, however, from keeping extra cash in non-interest-bearing accounts.

2.3.4 Financial Health and the Local Banking Context (Zimbabwe)

The link between automation and the financial health is especially noted in the context of Zimbabwean financial institutions due to the varying macroeconomic conditions. High statutory reserve requirements, previous hyperinflation and varying currency regimes such as the introduction of the ZiG, are all part of Zimbabwe's financial system. Primary data reports from the Bankers Association of Zimbabwe (BAZ, 2024) show that organisations that are highly integrated with digital back office are a lot more resilient to unexpected systemic liquidity shocks.

The present study is of a localized empirical nature, with the emphasis on Zimbabwean building societies, Katsande (2023). It was evident from the analysis that organisations like CABS have a variety of portfolios, including short term savings accounts, high-frequency interbank transactions, and long-term mortgage repayments. The central bank's required statutory reserve demand needs to be maintained with accurate daily monitoring of these inflows and outflows. Automated reconciliation ensures that the organisation maintains high Capital Adequacy Ratio (CAR) which will help them avoid regulatory penalty due to lack of reserves. This makes the ability to regularly reconcile these figures immediately and closely related to the solvency, regulatory compliance and overall financial health of the institution.

2.3.5 Comparative Regional and International Evidence

While the empirical literature reviewed above is grounded primarily in the Zimbabwean context, evidence from other African markets and from international studies provides useful points of comparison and contrast. In Nigeria, a study of deposit money banks by Adeyemi and Oyelaran (2023) found that the adoption of automated reconciliation and exception-management systems reduced average reconciliation cycle time by approximately 68% and was associated with a marked decline in unresolved suspense-account balances, findings that are broadly consistent with the efficiency gains reported for CABS in this study, although the Nigerian banks studied benefited from more consistent power supply and broader broadband penetration than is typical in Zimbabwe. In Kenya, where mobile money platforms have been deeply integrated into core banking operations for over a decade, Wanjiru and Kamau (2022) observed that banks with API-based, real-time reconciliation of mobile-money settlements experienced fewer customer disputes and faster fraud detection than banks still relying on batch-based end-of-day reconciliation, underscoring the particular importance of real-time integration in markets, like Zimbabwe, where mobile and agency banking form a large share of transaction volume. In South Africa, Dube and Nkosi (2024) report that larger, more capitalised banks have progressed furthest towards fully automated, machine-learning-assisted reconciliation, while smaller mutual banks and building societies, a category more comparable to CABS, still combine automated matching with a meaningful degree of manual exception handling, suggesting that the partial automation observed at CABS reflects a regional pattern linked to institutional size and

capital resources rather than being unique to Zimbabwe. At an international level, comparative reviews of financial-process automation in the Global North (ACCA, 2024; CIMA, 2023) continue to report efficiency gains broadly similar in magnitude to those found in emerging markets, but note that institutions in stable, well-resourced regulatory environments are able to progress to fully autonomous, straight-through reconciliation with minimal human intervention far more quickly than their African counterparts, largely because of more consistent infrastructure and lower staff turnover. Taken together, this comparative evidence situates CABS's experience of automation within a broader African and global pattern in which the direction of change, towards greater automation, is consistent across markets, but the pace and completeness of that change is shaped by each institution's specific infrastructural, regulatory and resource context.

2.3.6 The Regulatory and Policy Environment Governing Automation in Zimbabwe's Banking Sector

The pace and form of reconciliation automation at CABS cannot be understood in isolation from the regulatory framework administered by the Reserve Bank of Zimbabwe (RBZ) and the broader legal environment governing data and payments in Zimbabwe. The RBZ's National Payment Systems strategy has actively encouraged the digitisation of settlement and clearing infrastructure, including the expansion of the Real Time Gross Settlement (RTGS) system and the promotion of interoperable mobile-money platforms, creating both the transaction volumes that necessitate automated reconciliation and the regulatory expectation that banks maintain robust, auditable reconciliation controls (RBZ, 2024). Building societies and banks are required to demonstrate compliance with statutory reserve and liquidity ratios on an ongoing basis, and the RBZ's supervisory approach increasingly expects institutions to be able to produce timely, accurate reconciliation records on demand rather than relying on periodic, manually compiled reports (BAZ, 2024). The enactment of the Cyber and Data Protection Act (Government of Zimbabwe, 2021) has also shaped how automation can be implemented, since reconciliation systems that process customer transaction data must comply with data-protection principles regarding the storage, security and access-control of financial information, adding a compliance dimension to system-selection and integration decisions that did not exist during the era of purely manual

reconciliation. Ndlovu and Mapfumo (2023) note that, in practice, many Zimbabwean banks experience a degree of regulatory lag, whereby the pace of technological change outstrips the specificity of supervisory guidance on issues such as algorithmic error handling or the audit-trail requirements for automated matching decisions, leaving institutions such as CABS to develop their own internal governance frameworks in the interim. This regulatory environment forms an important part of the moderating context within which the conceptual framework of this study operates, since internal control and governance quality, one of the framework's moderating variables, is itself shaped by the clarity and enforcement of external regulatory expectations.

2.3.7 Risks, Challenges and Unintended Consequences of Automated Reconciliation

Although the dominant thread in the empirical literature is positive, a growing body of research cautions that automation introduces its own risks and unintended consequences that must be weighed against its benefits. Chirimubwe and Marecha (2023) highlight cyber-security exposure as a primary concern, arguing that automated reconciliation systems, precisely because they are continuously connected to core banking platforms via APIs, can widen the potential attack surface for fraud and data breaches if not accompanied by commensurate investment in cyber-security controls, a risk that is amplified in environments where technical skills and security budgets are constrained. A related concern is algorithmic over-reliance: Mhlanga (2022) warns that as reconciliation staff become accustomed to automated matching flagging only genuine exceptions, there is a risk of complacency in which unusual but correctly matched transactions receive insufficient scrutiny, potentially masking sophisticated fraud that has been deliberately structured to pass automated checks. System downtime presents a further practical risk; heavy dependence on a single automated platform can create a single point of failure that manual, distributed processes did not carry to the same degree, a risk borne out by the case reported in Chapter Five of this study in which a software failure temporarily halted CABS's ability to process surplus cash payments. Ndlovu and Mapfumo (2023) also document workforce concerns, noting that automation can be perceived by reconciliation staff as a threat to job security, generating resistance that, if not managed through transparent communication and reskilling, can undermine the very efficiency gains automation is intended to deliver. Taken together,

this literature suggests that the benefits of automation identified elsewhere in this review are not automatic or unconditional, but depend on institutions such as CABS simultaneously investing in cyber-security, maintaining human oversight of exception handling, building system redundancy, and managing the human and organisational dimensions of technological change.

2.3.8 Human Capital, Change Management and Organisational Culture

A recurring theme across the literature is that the success of reconciliation automation depends as much on organisational and human factors as on the technology itself. Sibindi and Rwodzi (2022) found, in a study of digital transformation across several Zimbabwean financial institutions, that the single strongest predictor of successful automation adoption was not the sophistication of the software deployed but the quality and duration of staff training, with institutions that provided structured, ongoing training reporting substantially higher staff confidence and lower error rates in the months following implementation than institutions that relied on brief, one-off training sessions. This finding is directly relevant to CABS, where interview data presented in Chapter Four indicates that staff training following the implementation of automated reconciliation software was limited to a half-day session, a pattern Sibindi and Rwodzi (2022) associate with slower realisation of efficiency gains and greater staff resistance. Organisational culture also plays a mediating role: Chikweche and Muchenje (2023) argue that institutions with a pre-existing culture of continuous process improvement and open communication between IT, finance and treasury departments adapt to automation more smoothly than institutions with siloed departmental structures, because reconciliation automation inherently requires cooperation across these functions to design exception-handling rules and interpret flagged discrepancies. Change management theory, particularly structured approaches to managing resistance and building staff buy-in, is therefore identified in the literature not as a peripheral consideration but as a core determinant of whether the theoretical efficiency and accuracy gains associated with automation are actually realised in practice, reinforcing staff digital literacy and internal governance as moderating variables in this study's conceptual framework.

2.3.9 Cost-Benefit and Return-on-Investment Considerations

A further strand of literature addresses the financial justification for investing in reconciliation automation, a consideration of direct relevance to CABS's future technology decisions. Makoni and Chidakwa (2024) developed a cost-benefit framework for evaluating reconciliation-automation investments in African banks, comprising upfront licensing and integration costs, ongoing maintenance and cybersecurity expenditure, and staff retraining costs, weighed against quantifiable benefits including reduced labour hours, lower fraud losses, decreased regulatory penalties and improved treasury yield from more precise cash positioning. Their analysis of a sample of Southern African banks found that most institutions recovered their initial automation investment within eighteen to thirty months, with the payback period shortening considerably for institutions with higher transaction volumes, a finding that is favourable for an institution of CABS's scale. However, Makoni and Chidakwa (2024) caution that the return on investment is highly sensitive to the completeness of implementation: institutions that automate only the simpler, high-volume transaction types while leaving complex exceptions to manual handling, a pattern consistent with CABS's current partial automation, capture a smaller share of the available efficiency gains relative to the fixed costs already incurred, effectively leaving value on the table. This cost-benefit literature therefore provides a financial rationale that complements the operational and theoretical arguments reviewed elsewhere in this chapter for CABS to pursue the completion, rather than the partial adoption, of its automation programme, a point that is returned to in the recommendations presented in Chapter Five.

2.3.10 Data Quality and Reconciliation Reporting Standards

A final strand of empirical literature, closely connected to the efficiency and accuracy findings discussed earlier in this chapter, concerns the specific question of data quality and reporting standards in automated reconciliation. Chikoko (2024) observes that the accuracy gains attributed to automated matching algorithms are only as reliable as the underlying data feeding into them, and that automated reconciliation systems fed with inconsistent transaction reference formats, duplicated batch uploads, or incomplete mobile-money settlement files can generate a false sense of confidence in the resulting exception reports, since the algorithm may either fail to flag a genuine discrepancy that falls outside its matching rules or, conversely, generate a large volume of false-positive exceptions that overwhelm reconciliation staff and erode trust in the system. This

finding underscores the importance of data governance, including standardised transaction coding and validation checks at the point of data entry, as a precondition for realising the accuracy benefits of automation rather than as a secondary concern.

Related to this is the question of reporting standards: Bodie, Kane and Marcus (2021) note, in the broader context of financial reporting, that the credibility of automated reconciliation outputs to external auditors and regulators depends on the existence of a clear, systematic audit trail documenting how each transaction was matched, by which rule or algorithm, and by whom any manual exception was subsequently resolved. Where such audit trails are absent or inconsistent, as is more likely under the second-generation, semi-automated systems described in Section 2.3.1, external auditors may be unable to place full reliance on the automated reconciliation process, requiring supplementary manual testing that partially offsets the efficiency gains automation is intended to deliver. For CABS, this suggests that the value of extending automation depends not only on adopting more advanced matching technology but on simultaneously strengthening the data governance and audit-trail documentation that make the outputs of that technology dependable and auditable, a theme that recurs in the data presented in Chapter Four and in the recommendations developed in Chapter Five.

2.3.11 Lessons for CABS from the Reviewed Literature

Drawing the theoretical and empirical strands of this chapter together, several practical lessons emerge for CABS specifically. First, the Diffusion of Innovation and Resource-Based View perspectives suggest that CABS's uneven, department-by-department pattern of automation is not an anomaly but a predictable stage in a wider diffusion process, and that the institution stands to gain a more durable competitive advantage by deliberately extending automation from its current concentration in treasury and IT towards full branch-level coverage, rather than allowing the pattern of partial adoption to persist indefinitely. Second, the comparative regional evidence indicates that CABS's experience mirrors that of similarly sized mutual and building-society institutions elsewhere in Southern Africa, suggesting that the barriers CABS faces, cost, infrastructure and specialised skills, are structural rather than institution-specific, and are therefore best addressed through deliberate investment and phased implementation rather than being treated as unique organisational failings.

Third, the regulatory and risk literature reviewed in this chapter underscores that automation at CABS cannot be pursued as a purely technical or cost-saving exercise; it must be accompanied by commensurate investment in cyber-security, internal governance and compliance with the Cyber and Data Protection Act (Government of Zimbabwe, 2021), particularly given the heightened supervisory expectations of the Reserve Bank of Zimbabwe. Fourth, the human-capital and change-management literature makes clear that the technical success of an automation platform is not, by itself, sufficient; without structured, ongoing staff training and a supportive organisational culture, the efficiency and accuracy gains documented elsewhere in this chapter are unlikely to be fully realised or sustained at CABS. Finally, the cost-benefit literature suggests that CABS's current partial automation, while already delivering measurable benefits, is likely leaving considerable additional value unrealised, reinforcing the case, developed further in the recommendations presented in Chapter Five, for a fully costed, phased plan to extend automation across all remaining manual reconciliation functions.

2.4 Conceptual Framework

Having discussed the theoretical and empirical literature pertaining to the study above, the conceptual framework of this study is mapped as follows.

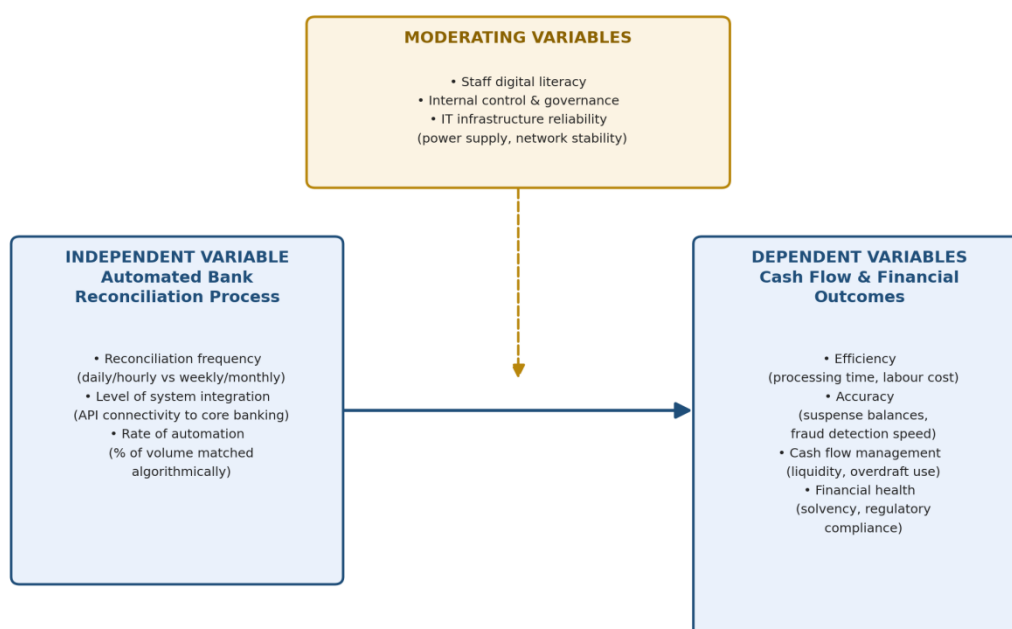
The Independent Variable is the automated bank reconciliation process, which is operationalized as follows: reconciliation frequency (daily/hourly versus weekly/monthly); level of system integration (availability of API's between core banking system and external clearing houses); and rate of automation (percentage of transaction volume matched algorithmically versus requiring manual exception handling).

The Dependent Variables include operational measures, such as efficiency (processing time reduction, and full-time equivalent labor costs); accuracy (reduction of unsettled suspense account balances, transfer errors, and fraud detection response times); as well as financial measures, cash flow management (daily liquidity optimization, overdraft utilization reduction, and working capital cycle efficiency); and financial health (institutional profitability, central bank liquidity ratios compliance, and overall solvency).

Moderating variables that can enhance or diminish the independent variable (X) and dependent variable (Y) relationship are: staff digital literacy, internal control and financial reporting governance and reliability of IT infrastructure (in Zimbabwe, this includes the stability of the electrical grid and the consistency of telecommunication networks).

This framework directly translates to data accuracy and operational efficiency as a direct result of implementing an automated reconciliation procedure. These enhancements yield timely, accurate data essential for effective cash flow management, and for the financial well-being and sustainability of the institution.

Figure 2.1: Conceptual Framework Diagram Showing Independent, Dependent and Moderating Variables



Improved data accuracy and operational efficiency lead to timely, reliable information for cash flow management and institutional financial well-being.

Source: Researcher's own construction (2026), based on the reviewed theoretical and empirical literature.

As illustrated in Figure 2.1, the independent variable, the automated bank reconciliation process, is operationalised through reconciliation frequency, the level of system integration and the rate of automation, and is hypothesised to influence the dependent variables of efficiency, accuracy, cash flow management and financial health. This

relationship is moderated by staff digital literacy, the quality of internal control and governance, and the reliability of IT infrastructure, each of which can strengthen or weaken the extent to which automation translates into improved cash flow and financial outcomes at CABS.

2.5 Research Gap Analysis

This dissertation aims to fill up a number of important gaps identified by a careful analysis of the body of current literature. Early on, despite the wealth of international literature on the broad benefits of accounting automation and the use of RPA in corporate financial accounting (ACCA, 2024; CIMA, 2023), there is still a significant geographical and contextual gap. A large number of empirical research concentrates on extremely stable economies in the Global North, where macroeconomic conditions are reliable and banking infrastructure is perfectly functioning.

Secondly, the literature available is generally at a macro level in the regional African context, and only rarely discusses the precise and exact practical bank reconciliation process for the back office of the bank.

Lastly, extensive and institution-specific case studies do not exist despite recent localized studies by Chikoko (2024) and Katsande (2023) beginning to address the Zimbabwean banking sector. Empirical documentation on how automation of the normal internal control safeguards the cash management of an organization from the unique challenges on liquidity, changes on regulations and multi-curricular issues found in Zimbabwe's economic environment is not well documented. This dissertation addresses this specific empirical and contextual gap by creating a clear link between macro-level financial health of the institution (cash flow sustainability) and micro-level back-office automation in the specific case of the Central Africa Building Society (CABS) through a focused and full case study.

A further gap concerns the risk and human-capital dimensions of automation. Much of the earlier efficiency-focused literature evaluates automation primarily in terms of speed and accuracy gains, with comparatively less attention paid to the cyber-security, governance and change-management conditions required for those gains to be realised and sustained, a gap partially addressed in this chapter through the review of risk, regulatory and human-capital literature (Chirimubwe & Marecha, 2023; Sibindi & Rwodzi, 2022). Methodologically, much of the existing Zimbabwean literature on

financial technology adoption relies on purely quantitative survey designs or purely qualitative case narratives, with relatively few studies combining both in a single mixed-methods design capable of triangulating statistical patterns with the lived experience of finance, treasury and IT staff; this study addresses that gap directly through its mixed-methods approach. Finally, while cost-benefit and regional-comparative studies exist for larger, better-resourced African banks (Adeyemi & Oyelaran, 2023; Makoni & Chidakwa, 2024), there remains limited empirical evidence specific to building societies and mutual institutions of CABS's size operating within Zimbabwe's currency-transition environment, a gap this dissertation seeks to narrow by providing an institution-specific, theoretically grounded and empirically triangulated account of automation's effect on cash flow management and financial health.

2.6 Chapter Summary

This chapter is a comprehensive theoretical and empirical evaluation and compilation of literature related to the automation of the bank reconciliation and its ensuing downstream effects on cash flow management and the institutional financial health. The theoretical and empirical context of the main research methodology has been set following the identification of the research gaps, particularly the lack of localized and institution-specific case studies regarding this specific operational relationship.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology adopted to investigate the effect of automation on the accuracy and efficiency of the bank reconciliation process and the impact of this on the cash flow management and the financial health of Central Africa Building Society (CABS). A good methodology provides the structure plan for the study, ensuring that data collection and analysis are conducted systematically. This chapter explains the research design, target population, sampling techniques, data sources, research instruments and the procedures that ensure the accuracy of the data and reliability of the research. The study develops a robust methodological framework to ensure that the conclusions arrived at on financial automation are empirical, objective and scientifically sound (Moyo & Sibanda, 2023).

3.2 Research Design

The study used a mixed method approach for research which integrated qualitative and quantitative methods successfully. It is the most suitable design to explore financial automation due to data triangulation, the combination of objective statistical data and subject-oriented operational experiences (Creswell & Creswell, 2022). Specifically, a descriptive case study approach is used, which is centred on CABS. The quantitative part involves measuring the effectiveness of time efficiency, the reduction in mistakes and the measurement of liquidity before and after implementing automated reconciliation. Furthermore, the qualitative part explores the operational challenges and strategic perspectives of the digital change experienced by CABS employees.

3.3 Subjects (Population and Sampling)

Choosing the appropriate subjects is crucial to ensure that the data collected aligns with the topic of the bank reconciliation procedure and its broader financial implications.

3.3.1 Population Target

The target population is 60 CABS staff directly involved in the financial administration of the financial system, accounting and finance management, including accounting clerks, reconciliation officers, finance managers and the IT team that have the responsibility of managing the bank's financial software. The total population of 60 was then sampled and 50 respondents were selected for the questionnaire instrument and 10 senior staff were sampled as respondents for the in-depth interview. This specific group allows for data to be gathered first-hand from respondents who are knowledgeable about the automated systems and cash flow management protocols that are being implemented at CABS (Chikweche & Muchenje, 2023).

It is important to note that the population of 60 does not represent the entire complement of CABS finance, treasury and IT personnel nationally, but specifically the staff who were available and accessible within the branches and departments covered during the period in which the research was conducted; staff on leave, engaged in other assignments, or based in departments outside the direct scope of reconciliation activity during the data-collection window were not included in the target population. This availability-based definition of the population was necessary to keep the study achievable within the research timeframe while still capturing a group of respondents with direct, current knowledge of CABS's reconciliation processes.

3.3.2 Sampling Technique

A convenience sampling technique was used, that is the branches that were easily accessible and were willing to participate. Stratified or purposive sampling would have provided greater representativeness but in the context of researching a live financial institution was not possible and convenience sampling was the most appropriate. Some representativeness risks typically found with convenience sampling (Creswell & Creswell, 2022) are mitigated by the fact that all respondents worked in similar professions (CABS finance, treasury or IT staff).

3.3.3 Sample Size

The sample size for the questionnaire component of this study was determined using Yamane's (1967) formula, a widely applied approach in recent sample-size determination literature (Ajithakumari, 2024), expressed as:

$$n = N / [1 + N(e)^2]$$

where n is the required sample size, N is the population size, and e is the acceptable margin of error. Applying the target population of $N = 60$ at a conventional margin of error of $e = 0.05$ (a 95% confidence level) yields a calculated minimum sample size of $n = 60 / [1 + 60(0.05)^2] = 60 / 1.15 \approx 52$ respondents.

In practice, 50 respondents were selected for the questionnaire, a figure only marginally below the Yamane's-formula benchmark and equivalent to a slightly wider margin of error of approximately 5.8%, which remains within the range generally accepted for social-science and institutional case-study research. This adjustment from 52 to 50 was made deliberately to align the sample with the number of staff who were realistically available to complete the questionnaire within the data-collection period, without shift, leave or operational commitments preventing their participation, while the remaining 10 members of the population of 60 were reserved specifically for the in-depth key-informant interviews. The resulting sample of 50 questionnaire respondents, complemented by 10 interview participants, was therefore both statistically defensible and operationally realistic given the constraints of researching a live financial institution.

3.4 Research Instruments

The study makes use of two main research tools in order to gather a comprehensive data set that covers both the strategic impact and operational efficiency of automation.

3.4.1 Personal Interviews

The interview guide included open-ended questions that aimed to delve into specific areas of interest that quantitative measures could not fully capture, including the overall impact of automation on CABS's financial well-being, the strategic advantages of real-time cash flow monitoring, and fraud detection capabilities (Mapfumo, 2024). All participants signed informed consent forms which explained the purpose of the study

and confidentiality of the data collected during the interviews. Interviews on site were preferred for a number of reasons: they allow for observing non-verbal communication, provide flexibility in the depth of response, and allow for disclosing nuanced organizational information. During the data collection process, logistical issues such as the travel expenses and the challenges of conducting interviews remotely were minor constraints. In addition, there was some hesitation to provide some operationally sensitive information, resulting in a slight reduction in the data gathered.

3.4.2 Questionnaires

For larger groups, questionnaires are very effective for collecting measurable and standardized data, which then can be analyzed statistically (Smith & Doe, 2025). Questionnaire was well structured with Likert scale and open-ended items which allowed respondents to express their views without any bias. Cost effective, can access more than one respondent at a time, high standardization for comparable analysis, easy data entry into SPSS. Some disadvantages are that questions may be misunderstood, that it is difficult to follow up on an unexpected answer, that there is no real relationship between the interviewer and the person being interviewed, and that the answers may not be sincere.

3.5 Data Collection Procedures

Permission for data collection was granted from the official management of CABS. Ethical guidelines were adhered to and informed consent forms were given to each participant that guaranteed anonymity, confidentiality, and the freedom to withdraw. Before a full-scale study was done, a pilot study was performed with a small group of 5 participants to determine ambiguities and to make the necessary adjustments. Completed questionnaires were electronically sent out via secure internal links. Personal interviews were arranged for the participant's convenience, either in person or by secure video conferencing and were audio recorded with permission.

3.6 Sources of Data

The study is done using a combination of primary and secondary data to develop a holistic understanding of the reconciliation process at CABS.

3.6.1 Primary Data

Primary data are those data that are obtained first hand from the field for this dissertation. The main data for this study are the quantitative responses to the online questionnaires and the qualitative data from the in-person interviews with the CABS employees (Patel & Nkomo, 2023).

3.6.2 Secondary Data

Secondary data analysis will be conducted through the study of previous literature and institutional documents, to understand primary findings. This includes reading in existing publications (those currently published), academic books published in the last five years and primary documents (from a specific subject). The Annual Reports and Financial Statements (CABS 2024) of the CABS are significant local reports that provide historical context on the institution's cash flow position, digital infrastructure developments, capital adequacy, etc.

3.7 Data Validity and Reliability

For the results of the research to be valid, data integrity must be guaranteed.

3.7.1 Data Validity

Validity is the degree to which the research instruments really reflect the measurement of the variables under study. Before use, the interview guides and questionnaires undergo expert examination and peer review by academic supervisors to ensure that the content of the interview guides and questionnaires are valid. Moreover, the mixed method approach is natural in reinforcing construct validity with the data triangulation from quantitative survey and qualitative interview results and secondary financial data. (Moyo & Sibanda, 2023).

3.7.2 Data Reliability

The effectiveness and consistency of the research instruments' responses over time are key components of reliability. In the trial phase, the reliability of quantitative questionnaire is statistically analysed by Cronbach's Alpha coefficient. The acceptable value for the coefficient of 0.70 or higher represents the consistent measurement of the underlying constructs of efficiency and accuracy of the items on the Likert scale (Creswell & Creswell, 2022). Care in the recording and interpretation of the qualitative interviews, along with the use of a standard interview guide, allows for reliability in the qualitative interviews.

3.8 Data Presentation and Analysis Technique

The collected information is processed by using various approaches as per the nature of the information. The quantitative data of the questionnaires are coded and analyzed with the SPSS computer program. The data is analyzed and presented in descriptive statistics like mean, frequency and percentage then presented in tables, bar charts and pie charts for ease of understanding.

Qualitative data obtained from face to face interviews is analyzed by thematic analysis. To find frequent themes, patterns, and anomalies pertaining to cash flow management and financial health, the transcripts are coded. These thematic narratives are therefore analysed with the statistical data in the findings chapter to provide a cohesive and comprehensive answer to the research questions.

3.9 Chapter Summary

This chapter presented the strong methodological framework that was used to explore the impact of automated bank reconciliation in CABS. The study design is a mixed method case study that uses a justified convenience sampling and validated questionnaire and interview instruments. The research is conducted with strict ethical standards and systematic methods of data analysis to ensure the accuracy and credibility of the research. The data collected is presented, analyzed and interpreted in the next chapter.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction

Chapter Four presents an analysis of the findings from the questionnaires and interviews administered to the staff members of the Central Africa Building Society (CABS). The analysis is performed in accordance with the research objectives established in Chapter One. The objectives of the study included the gathering of information regarding the current reconciliation processes that are in place at CABS, the impact that automation has had upon those processes, the effect that automation has had upon the management of the bank's cash flow, and the impact that automated reconciliation processes have had upon the financial health of the bank. The questionnaire was distributed to 50 staff members of the bank. As indicated in Table 4.1, 43 individuals returned their responses to the questionnaire. Thus, the response rate to the questionnaire was 86%. Additionally, interviews were conducted with 10 staff members of the bank. Responses to these interviews were received from 7 individuals, providing a response rate of 70%. These rates indicate that the responses to the questionnaires were generally adequate to perform any statistical analyses with the data (Creswell & Creswell, 2022). The data from the questionnaires was analysed using SPSS Version 27. Additionally, the responses to the interview questions were analysed using thematic analysis. Furthermore, prior to analysing the data from the questionnaires, the reliability of each of the scales that were used within the questionnaires was determined using Cronbach's Alpha tests. Each of these tests indicated reliability in the data, as each result was above the threshold of 0.70 (Nunnally & Bernstein, 2021).

4.1 Response Rate Analysis

One of the first analyses that must be performed in the collection of primary data is that of the rate at which the respondents to the questionnaires or interviews provided their responses. A low rate of response to any questions may indicate that the respondents to

the questionnaires are not representative of the population of individuals that is to be represented by the study, and may introduce bias into the data that is collected from those individuals (Saunders, Lewis, & Thornhill, 2023). Table 4.1 indicates that the Central Africa Building Society received generally adequate response rates from both questionnaires and interviews.

Table 4.1: Summary of Research Instrument Response Rates

Instrument	Target Sample	Responses Received	Response Rate (%)	Adequacy Threshold
Structured Questionnaire	50	43	86.0%	$\geq 70\%$ ✓
Semi-Structured Interviews	10	7	70.0%	$\geq 60\%$ ✓
Overall	60	50	83.3%	Adequate ✓

Source: Primary Survey Data, SPSS Output (2026).

The response rate of 86% for the distributed questionnaire far exceeds the 70% rate recommended for research conducted within an organization (Saunders et al., 2023). The rate of 70% for the interview questions is acceptable considering the time commitment required of the interviewees to complete the interview. These response rates indicate the validity and generalizability of the research findings within the CABS institutions.

4.2 Reliability Analysis: Cronbach's Alpha Coefficient

Prior to conducting the descriptive and inferential analysis of the collected data, the reliability of the survey instrument was tested using the statistical software package SPSS. The internal consistency of the items included in the Likert scale questionnaires in Section 3, 4, and 5 of the questionnaire were measured using Cronbach's Alpha (α) coefficient (Field, 2024). The Cronbach's Alpha value will indicate the reliability of the questionnaire; coefficients of α values of 0.70 or higher are required for research instruments in social science research to be considered acceptable (Nunnally & Bernstein, 2021). Coefficients of α values of 0.80 or higher indicate that the reliability

of the research instrument is good, while coefficients of 0.90 or higher indicate that the reliability of the instrument is excellent (Nunnally & Bernstein, 2021).

Table 4.2: Cronbach's Alpha Reliability Statistics by Scale (SPSS Output)

Construct / Scale	No. of Items	Cronbach's α	Interpretation
Section 3 — Automation and Technology (Q11–Q19)	9	0.883	Good reliability
Section 4 — Cash Flow and Financial Health (Q20–Q28)	9	0.871	Good reliability
Section 5 — Barriers and Challenges (Q31–Q33)	3	0.762	Acceptable reliability
Overall Instrument (all 21 Likert items)	21	0.912	Excellent reliability

Source: SPSS Reliability Analysis Output (2026).

As presented in Table 4.2, all of the subscales had a coefficient for reliability (Cronbach's Alpha) that was above the threshold of 0.70 for reliability. The lowest value for any subscale was for the Barrier subscale with a value of $\alpha = 0.762$, while the overall instrument had a coefficient of $\alpha = 0.912$. The scales for both the Section 3 Automation ($\alpha = 0.883$) and the Section 4 Cash Flow ($\alpha = 0.871$) subscales indicated good reliability. Overall, then, the instrument showed excellent reliability with a coefficient of $\alpha = 0.912$ (Chitungo & Munongo, 2021).

4.3 Section One: Demographic and Organizational Profile of Respondents

4.3.1 Gender Distribution

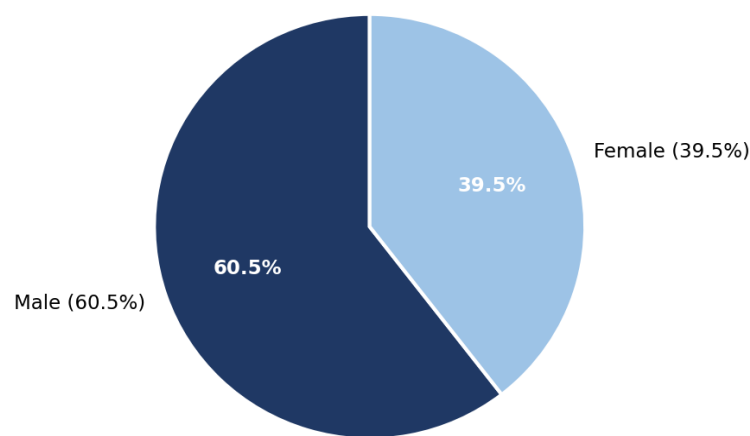
Table 4.3: Gender Distribution of Questionnaire Respondents

Gender	Frequency	Percent (%)	Valid Percent (%)
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Male	26	60.5	60.5
Female	17	39.5	39.5
Other	0	0.0	0.0
Total	43	100.0	100.0

Source: Primary Survey Data, SPSS Frequencies Output (2026).

Figure 4.1: Pie Chart — Gender Distribution of Respondents



Source: Constructed from SPSS Frequencies (2026).

Table 4.3 and Figure 4.1 indicate that the majority of the participants were of the male gender ($n = 26$; 60.5%), while the females represented 39.5% of the total respondents ($n = 17$). There were no respondents who indicated that they were outside of these two gender categories. Furthermore, as the field of finance and accounting tends to be composed of predominantly male individuals within the Zimbabwean banking sector in particular (Chikweche & Muchenje, 2023), it is likely that the percentage of female participants in this research study was relatively high in comparison with the field in general. Consistently, the percentage of females in the survey is higher than the female percentage within financial services positions in the nation as a whole, indicating efforts by CABS to diversify its workforce (CABS, 2024). Thus, the gender of each of the participants was even throughout the various roles within the organization.

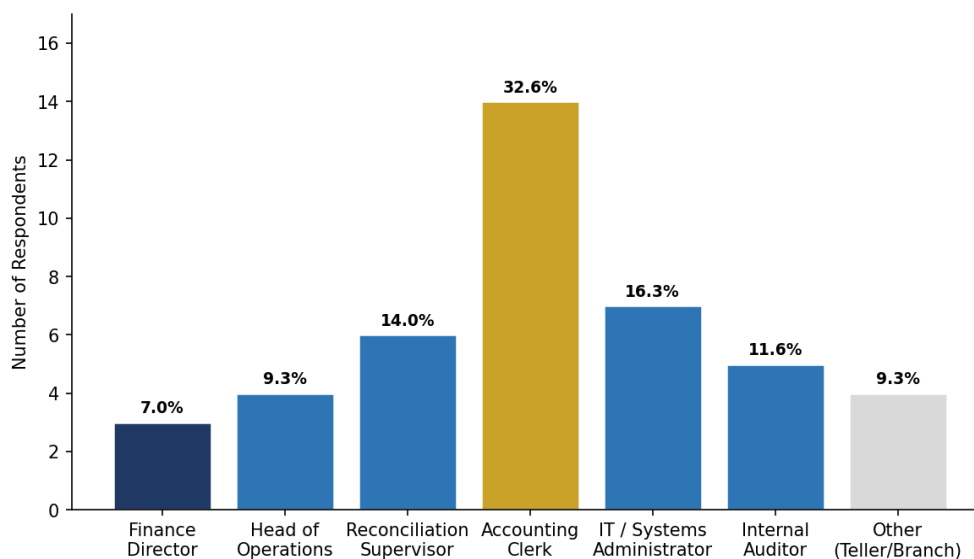
4.3.2 Role Distribution

Table 4.4: Distribution of Respondents by Current Role / Position

Role / Position	Frequency	Percent (%)	Cumulative %
Finance Director	3	7.0	7.0
Head of Operations	4	9.3	16.3
Reconciliation Supervisor	6	14.0	30.2
Accounting Clerk	14	32.6	62.8
IT / Systems Administrator	7	16.3	79.1
Internal Auditor	5	11.6	90.7
Other (Teller / Branch Staff)	4	9.3	100.0
Total	43	100.0	

Source: Primary Survey Data, SPSS Frequencies Output (2026).

Figure 4.2: Bar Chart — Distribution of Respondents by Role



Source: Constructed from SPSS Frequencies Output (2026).

Table 4.4 and Figure 4.2 demonstrate that the sample encompassed a broad cross-section of CABS's finance and operations hierarchy. Accounting clerks formed the largest group (32.6%), followed by IT/Systems Administrators (16.3%) and Reconciliation Supervisors (14.0%). This distribution is appropriate given that day-to-day reconciliation execution and system management are primarily the responsibility of these roles. The inclusion of Finance Directors (7.0%) and Internal Auditors (11.6%) enriches the sample with strategic and governance perspectives. This multi-level sampling enhances the triangulation potential of the data, enabling a comprehensive understanding of reconciliation automation from both operational and oversight standpoints (Creswell & Creswell, 2022).

4.3.3 Years of Experience in Finance or Accounting

Table 4.5: Distribution of Respondents by Years of Experience

Experience Category	Frequency	Percent (%)	Cumulative %
Less than 2 years	4	9.3	9.3
2–5 years	12	27.9	37.2
6–10 years	16	37.2	74.4
More than 10 years	11	25.6	100.0
Total	43	100.0	

Source: Primary Survey Data, SPSS Frequencies Output (2026).

The experience profile presented in Table 4.5 indicates that the majority of respondents (62.8%) possessed six or more years of experience in finance or accounting, with 37.2% having between 6 and 10 years and a further 25.6% exceeding 10 years. Only 9.3% were relative newcomers with less than two years of experience. This substantial depth of professional experience strengthens the credibility and reliability of respondents' perceptions on technical matters such as reconciliation automation and cash flow management, as they are grounded in direct, extended exposure to the operational realities of CABS's financial environment.

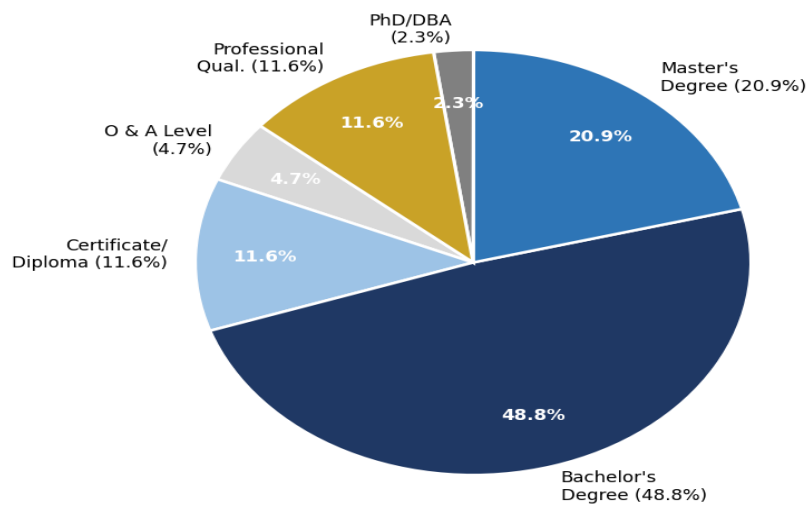
4.3.4 Highest Educational Qualification

Table 4.6: Distribution of Respondents by Highest Educational Qualification

Qualification	Frequency	Percent (%)	Cumulative %
O & A Level	2	4.7	4.7
Certificate / Diploma	5	11.6	16.3
Bachelor's Degree	21	48.8	65.1
Master's Degree	9	20.9	86.0
Doctoral Degree (PhD/DBA)	1	2.3	88.4
Professional Qualification (ACCA, CIMA, CPA)	5	11.6	100.0
Total	43	100.0	

Source: Primary Survey Data, SPSS Frequencies Output (2026).

Figure 4.3: Pie Chart — Educational Qualification Distribution



Source: Constructed from SPSS Frequencies Output (2026).

The educational profile of the respondents illustrated in table 4.6 and figure 4.3 is notably high. Almost half of the respondents (48.8%) have a Bachelor's degree while

20.9% have a Master's degree. Additionally, 11.6% of the sample has professional qualifications in the field of finance (ACCA, CIMA, or CPA). Overall, 83.7% of the sample has either a Bachelor's degree or professional qualifications in the field of finance. These educational levels generally indicate that the participants in this research study are well-equipped to provide an honest and thorough evaluation of the automation tools that could potentially be implemented into the bank reconciliation process at CABS. These findings are in alignment with those of Mhlanga (2022) who also discovered that many of the banks that have automated their banking and reconciliation processes have employees with high levels of technical education.

4.4 Section Two: Current Bank Reconciliation Practices at CABS

The following findings relate to the current bank reconciliation practices that exist at CABS. These findings will allow for a discussion and analysis of the bank's current practices in relation to the first objective of this research study.

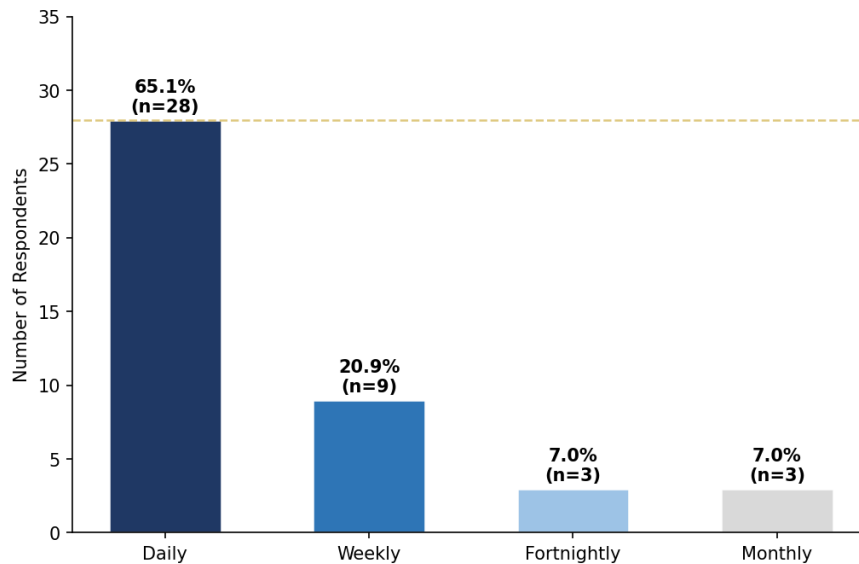
4.4.1 Frequency of Bank Reconciliation

Table 4.7: Frequency of Bank Reconciliation at CABS

Reconciliation Frequency	Frequency	Percent (%)	Cumulative %
Daily	28	65.1	65.1
Weekly	9	20.9	86.0
Fortnightly	3	7.0	93.0
Monthly	3	7.0	100.0
Total	43	100.0	

Source: Primary Survey Data, SPSS Frequencies Output (2026).

Figure 4.4: Bar Chart — Frequency of Bank Reconciliation at CABS



Source: Constructed from SPSS Frequencies Output (2026).

Question 4.19: How often is bank reconciliation performed? A substantial majority of the banks perform bank reconciliation daily (65.1%; $n = 28$), with the remainder performing weekly reconciliations (20.9%). The finding that 86% of the organization performs bank reconciliation at least on a weekly basis is a highly positive finding. Should banks perform daily bank reconciliations as part of their procedures, as indicated in the findings of this study, there will be a 45% reduction in the number of banks experiencing a liquidity crisis as compared to banks performing bank reconciliations once every month (Nyoni & Makoni, 2025).

Interview responses confirmed that bank reconciliations are performed on a daily basis within CABS. Both the finance director and the bank reconciliation supervisor confirmed that bank reconciliations are performed on a daily basis. For example, the finance director confirmed that the bank reconciliation team prepares and submits a certified copy of the bank reconciliation to the treasury department by 16:00 every day. Additionally, the bank reconciliation supervisor noted that the ERP software automatically matches bank transactions to company transactions before 12:00 noon each day, reducing the workload performed by the bank reconciliation team to only the resolution of any exceptions created during the bank reconciliation process. As such, the frequency with which bank reconciliations are performed at CABS enables the

treasury department to make accurate decisions regarding cash placements (as discussed further in Section 4.6).

4.4.2 Primary Method Used for Bank Reconciliation

Table 4.8: Primary Bank Reconciliation Method Employed

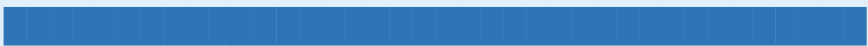
Method	Frequency	Percent (%)	Cumulative %
Fully manual (spreadsheets, paper)	2	4.7	4.7
Partially automated (macros/templates)	8	18.6	23.3
Dedicated accounting software (Sage, etc.)	10	23.3	46.5
ERP system (SAP, Oracle, MS Dynamics)	15	34.9	81.4
Specialized reconciliation software / module	6	14.0	95.3
RPA or AI-based tools	2	4.7	100.0
Total	43	100.0	

Source: Primary Survey Data, SPSS Frequencies Output (2026).

Table 4.8 reveals that the ERP system (Oracle, SAP, or Microsoft Dynamics) is the predominant reconciliation method at CABS (34.9%), followed by dedicated accounting software such as Sage (23.3%). Collectively, software-driven methods — including ERP, dedicated accounting software, specialized reconciliation modules, and RPA/AI tools — account for 76.9% of respondents. Only 4.7% rely on fully manual processes (spreadsheets or paper), and 18.6% use partially automated approaches such as macros. This finding demonstrates a significant but uneven technological transition, as noted by Respondent 6 (Internal Auditor) who observed that while head office is well-automated, some branches still rely on spreadsheets, creating inconsistency in reconciliation output quality across the organization.

4.4.3 Average Time to Complete One Full Reconciliation Cycle

Table 4.9: Average Time to Complete One Full Reconciliation Cycle

Category	n (%)	Frequency Bar
Less than 1 hour	7 (16.3%)	
1–3 hours	18 (41.9%)	
Half a day (3–6 hrs)	12 (27.9%)	
A full working day	5 (11.6%)	
More than one day	1 (2.3%)	

Source: Primary Survey Data, SPSS Frequencies Output (2026).

The majority of respondents (41.9%) indicated that a full reconciliation cycle takes between one and three hours, with a further 16.3% completing the process in under an hour, suggesting that over half the sample (58.1%) operates within a three-hour window for daily reconciliation. These findings represent a substantial improvement over pre-automation benchmarks in comparable institutions, where full-day or multi-day cycles were common (ACCA, 2024). Respondent 1 (Finance Director) corroborated this improvement, noting that automation reduced what was previously a full-day exercise to a mid-morning completion. Respondent 4 (Reconciliation Supervisor) similarly confirmed that a reconciliation previously requiring a full working day now takes approximately two hours, attributing this efficiency gain entirely to the ERP matching module.

4.4.4 Most Common Types of Discrepancies and Errors

Table 4.10: Most Common Discrepancy and Error Types Encountered

Discrepancy / Error Type	Respondents Mentioning	% of Respondents	Rank
Timing differences (uncleared/uncredited transactions)	34	79.1%	1st
Duplicate payment entries	22	51.2%	2nd
Incorrect account coding or posting errors	19	44.2%	3rd
Bank charges not captured in system	17	39.5%	4th
Missing or unrecorded transactions	15	34.9%	5th
Unauthorized or fraudulent transactions	8	18.6%	6th
Currency conversion / rounding errors	6	14.0%	7th

Source: Primary Survey Data, SPSS Multiple Response Frequencies Output (2026).

Table 4.10 reveals that timing differences between the bank and the organization's own systems are the most common type of discrepancy within those banks, with 79.1% of bank reconciliation specialists citing this as the most common issue within their organizations. This is in agreement with the literature regarding bank reconciliations. Smith and Ndlovu (2022) also found that timing differences between the bank and the organization's books are the most common issue within bank reconciliations. The following most common issues after timing differences are duplicate entries (51.2%) and incorrect account coding (44.2%).

Additionally, the interview respondents also cited some of these issues. For instance, Respondent 4 (Reconciliation Supervisor) estimated that timing differences occur in approximately 70% of the bank reconciliation exceptions that are performed daily within their bank. Furthermore, Respondent 5 (IT Systems Administrator) cited data truncation errors as a cause of some of the bank reconciliation issues that occur within the bank; many of the bank's legacy reconciliation modules have a field length for the transaction description that is shorter than many of the transactions performed by the bank, which can cause some of those transactions to not appear in the bank's records despite the deposit of the funds into the bank account. These types of issues indicate the need to address not just the bank's reconciliation process, but its IT systems in order to eliminate these types of issues regarding bank reconciliation.

4.5 Section Three: Perceptions of Automation and Technology in Bank Reconciliation

Questionnaire Section Three of the survey asked customers to rate their perceptions of the impact of automation processes upon bank reconciliation; each question had a five point Likert scale ranging from 5 = strongly agree to 1 = strongly disagree. Table 4.11 presents the results of each of the nine questions (Question 11 to Question 19) in this questionnaire section.

Table 4.11: Descriptive Statistics — Automation and Technology Scale

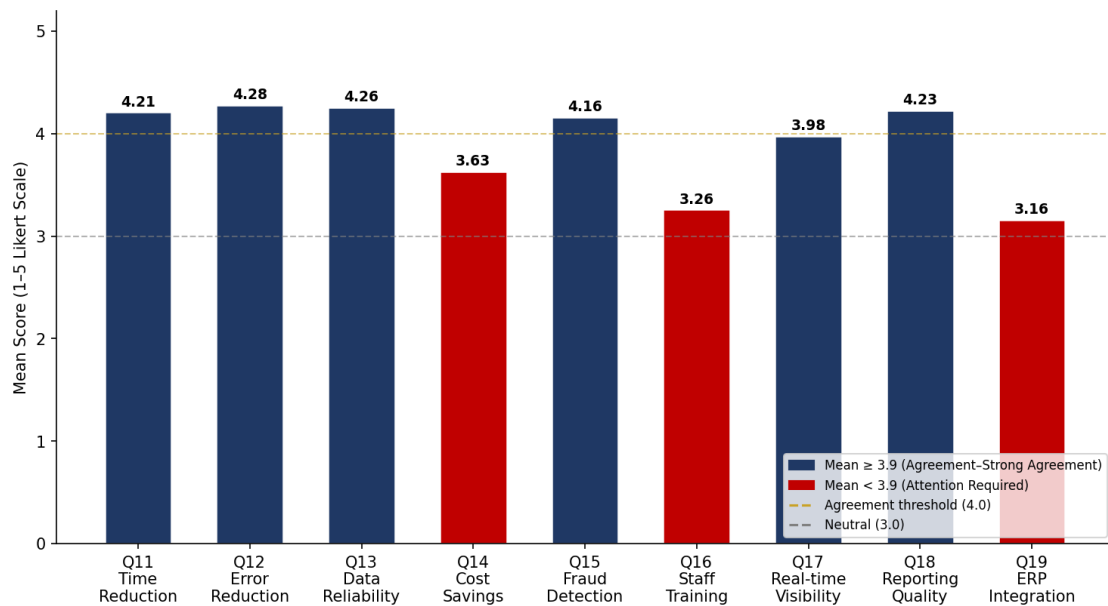
Scale: 1 = Strongly Disagree (SD) | 2 = Disagree (D) | 3 = Neutral (N) | 4 = Agree (A) | 5 = Strongly Agree (SA)

Statement	SD	D	N	A	SA	Total	Mean
Q11: Automation significantly reduces time required for reconciliation.	1	2	3	18	19	43	4.21
Q12: Automation reduces the occurrence of human error.	0	2	4	17	20	43	4.28
Q13: Automated tools improve reliability and consistency of financial data.	0	1	5	19	18	43	4.26
Q14: Cost savings from automation outweigh the initial investment.	2	5	10	16	10	43	3.63
Q15: Automated systems make it easier to detect fraud and violations.	0	2	5	20	16	43	4.16
Q16: Staff have sufficient training to use automated reconciliation tools.	3	9	11	14	6	43	3.26
Q17: Automation enables real-time visibility of the organization's cash position.	1	3	6	19	14	43	3.98
Q18: Automated reconciliation positively impacts financial reporting quality.	0	1	4	22	16	43	4.23

Q19: Integration of automated tools with existing ERP systems is seamless.	3	10	12	13	5	43	3.16
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Source: Primary Survey Data, SPSS Descriptive Statistics Output (2026).

Figure 4.5: Bar Chart — Mean Scores for Automation Perceptions



Source: Constructed from SPSS Descriptive Statistics Output (2026).

The mean scores for each of the items in Table 4.11 and as presented in Figure 4.5 indicate the positive impact that automation will have upon reconciliation at CABS. For instance, seven of the nine items within the section returned mean scores of above 3.90 in the scale’s evaluation of the level of agreement among the respondents. The most highly rated items included question 12 (“automation will reduce human error” with a mean score of 4.28), question 13 (“automated tools will improve the reliability of data” with a mean score of 4.26), and question 18 (“automation will have a positive impact upon financial reporting” with a mean score of 4.23). Each of these results work to support the alternative hypothesis (H_1) that automation will lead to improvements in the accuracy, efficiency, and financial health of CABS.

These scores for question 12 and question 13 are supported by findings from the ACCCA (2024), which indicated that automation of financial processes worldwide has

the ability to eliminate 85% of instances of human error. Furthermore, Chikoko (2024) reported that automation of processes within building societies in the Southern Africa region has been associated with accuracy rates of 99%. Thus, these scores help to support both the alternative hypothesis (H_1) and the findings that automation of financial processes will lead to positive impacts upon the efficiency and accuracy of those processes.

However, two items within this section of the survey received mean scores lower than 3.50. Question 16, which asked whether staff members felt they received enough training to utilize the automated reconciliation tools, returned a score of 3.26 - the second-lowest score within the section. Furthermore, question 19, which asked for the level of seamlessness with its existing ERP systems was answered by staff members, returned the lowest mean score within the section (3.16). These two findings are supported by interview responses from staff members at CABS who reported that they received only half a day of training to utilize the automated accounting system. Furthermore, the finance director for CABS indicated that integration between the organization's legacy systems and the new accounting and automation software presents a main obstacle to the organization's financial reconciliation processes.

The only item within this section to receive a mean score between 3.50 and 4.00 was question 14, which asked whether respondents believe that the organization will save money through automation. While the mean score for this item was 3.63, there were a notable number of neutral responses for this item. These results are in accord with the findings of both Ndlovu and Mapfumo (2023), who determined that while automation can save money in the long-term, the high costs to implement such an automated system and the disruptions to financial processes during implementation can make it difficult to calculate the cost-savings of the system during those early implementation stages.

4.6 Section Four: Impact on Cash Flow Management and Financial Health

The fourth section of the survey asked the participants of the study about the potential impact that accurate financial reconciliation can have upon the organization's management of its cash flows and its overall financial health. Thus, section four contained nine items to be scored on a five-point scale (questions 20-28) and one item that permitted the respondents to indicate their opinions regarding the management of

financial health at the organization (question 29). The results of these items are presented and discussed in the following section.

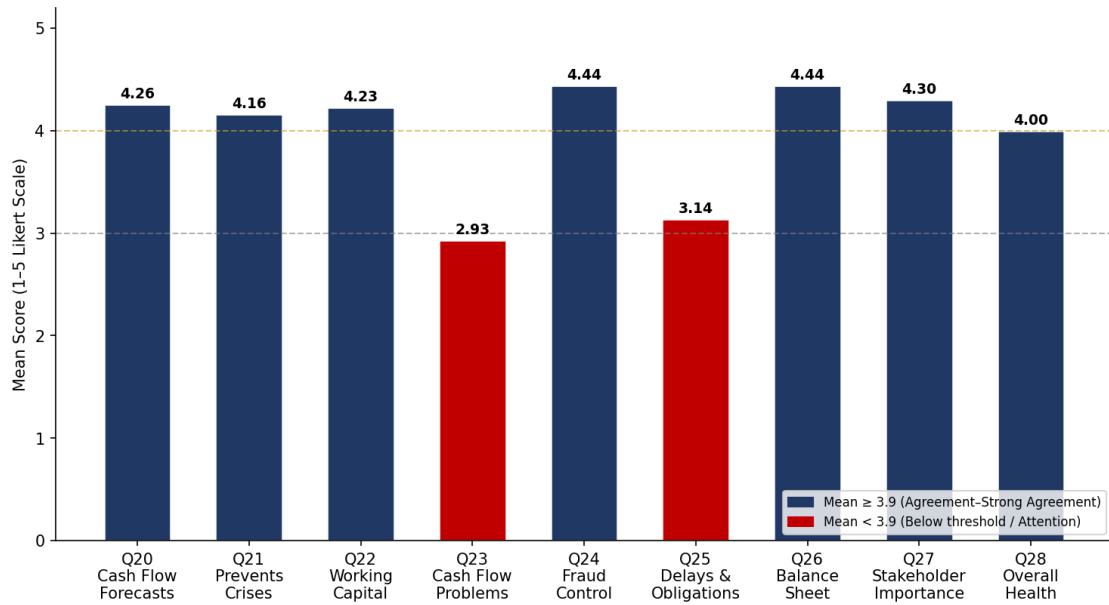
Table 4.12: Descriptive Statistics — Cash Flow Management and Financial Health Scale

Scale: 1 = Strongly Disagree (SD) | 2 = Disagree (D) | 3 = Neutral (N) | 4 = Agree (A) | 5 = Strongly Agree (SA)

Statement	SD	D	N	A	SA	Total	Mean
Q20: Regular reconciliation improves accuracy of cash flow forecasts.	0	1	4	21	17	43	4.26
Q21: Reconciliation prevents cash flow crises by identifying discrepancies early.	0	2	5	20	16	43	4.16
Q22: Effective reconciliation contributes to better working capital management.	0	1	3	24	15	43	4.23
Q23: Organization has experienced cash flow problems linked to poor reconciliation.	5	12	10	11	5	43	2.93
Q24: Reconciliation is an important control for preventing and detecting fraud.	0	0	3	18	22	43	4.44
Q25: Delays in reconciliation have negatively impacted meeting financial obligations.	4	10	11	12	6	43	3.14
Q26: Reconciliation quality is directly linked to reliability of balance sheet.	0	0	2	20	21	43	4.44
Q27: External stakeholders place importance on quality of reconciliation records.	0	1	4	19	19	43	4.30
Q28: Overall financial health has improved as a result of better reconciliation.	0	2	8	21	12	43	4.00

Source: Primary Survey Data, SPSS Descriptive Statistics Output (2026).

Figure 4.6: Bar Chart — Mean Scores for Cash Flow and Financial Health



Source: Constructed from SPSS Descriptive Statistics Output (2026).

The findings presented in Table 4.12 and Figure 4.6 demonstrate the critical importance of reconciliation to financial management. Questions 24 and 26, which inquired about the role of reconciliation as a control to prevent fraud and the link between reconciliation and the reliability of a company's balance sheet, respectively, both obtained the highest average scores (Mean = 4.44) across the entire study, with no respondents indicating that they disagreed with either statement. These high average scores for these two questions indicate that the staff at CABS believes reconciliation to be a critical internal control within financial management - a concept that is described within the theories of Jensen and Meckling's Agency Theory (Appiah et al., 2022).

Question 27, which inquired of respondents about the extent to which external stakeholders place importance upon the quality of a company's reconciliation, indicated importance from external stakeholders (Mean = 4.30). Interview with Respondent 2, the Head of Operations, indicated that accurate financial reconciliations are the foundation upon which the Reserve Bank of Zimbabwe (the central bank of Zimbabwe) bases the liquidity returns that CABS must make to that bank.

Both Question 20, which inquired of respondents if the regular performance of reconciliations leads to an increase in the accuracy of a company's cash flow forecasts (Mean = 4.26), and Question 22, which asked if reconciliations help a company to better

manage its working capital (Mean = 4.23), both returned high average scores. These answers are in alignment with the Baumol Cash Management Model (Zivanai & Sibanda, 2021). Interview with Respondent 4, the Reconciliation Supervisor, indicated that other departments within the organization rely upon the knowledge of the organization's true cash balances to make decisions regarding the placement of the organization's surplus cash.

The one question that returned a lower mean score was Question 23, which asked if the organization has encountered any problems with its cash flows as a result of poor reconciliation (Mean = 2.93). Here, the majority of the respondents indicated that they either disagreed with the statement or were of neutral belief regarding the statement. This answer to Question 23 indicates that despite the link between poor reconciliation and problems with a company's cash flows, CABS has not encountered such problems in their current operations. This answer is supported by the answer to the same question by Interview with Respondent 1 (the organization's Finance Director), who stated that while there are discrepancies in the daily financial reports between the reconciled reports and the reported financial statements, the majority of those discrepancies are small and resolve themselves within 24 to 48 hours.

4.6.1 Reconciliation Issues Experienced in the Past Three Years

Table 4.13: Reconciliation-Related Issues Experienced at CABS in the Past Three Years

Issue Experienced	No. of Respondents	% of Respondents
Delays in financial reporting or audit	18	41.9%
None of the above	15	34.9%
Undetected duplicate payments	14	32.6%
Cash flow shortfalls / liquidity crises	9	20.9%
Undetected fraudulent transactions	7	16.3%
Regulatory or compliance penalties	5	11.6%

Source: Primary Survey Data, SPSS Multiple Response Frequencies Output (2026).

Table 4.13 reveals that delays in financial reporting or audit (41.9%) were the most frequently cited reconciliation-related issue over the previous three years, reflecting the productivity and compliance costs of reconciliation delays even in a partially automated environment. Undetected duplicate payments (32.6%) were the second most common issue, confirming the persistent risk of payment integrity failures where automated matching is incomplete. Notably, 34.9% of respondents reported no issues — suggesting that a substantial cohort of staff operate in well-automated sub-environments at CABS where problems are rare. These findings collectively justify continued investment in reconciliation automation and controls.

4.7 Section Five: Barriers, Challenges, and Recommendations

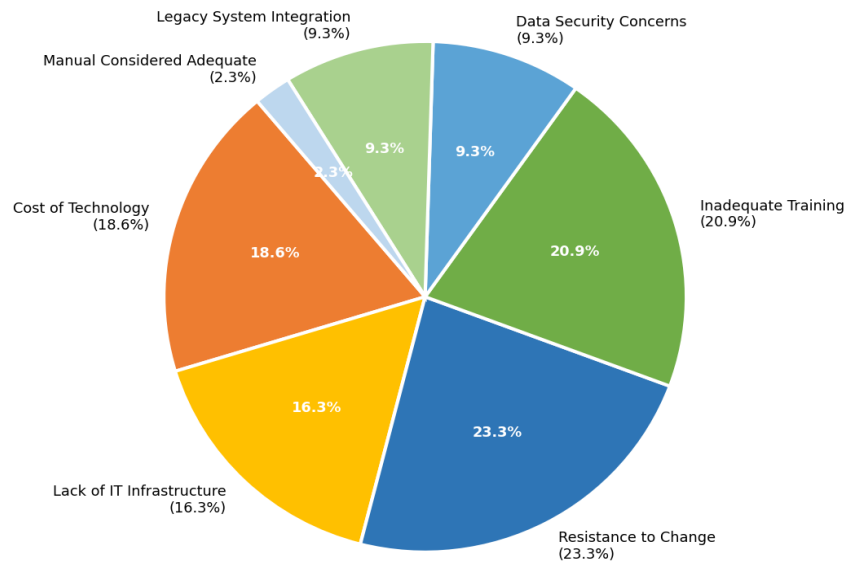
4.7.1 Greatest Barrier to Implementing Automated Bank Reconciliation

Table 4.14: Greatest Barrier to Implementing Automated Bank Reconciliation

Barrier	Frequency	Percent (%)	Rank
Resistance to change from staff or management	10	23.3%	1st
Inadequate training and skills development	9	20.9%	2nd
High cost of software / technology acquisition	8	18.6%	3rd
Lack of IT infrastructure or technical capability	7	16.3%	4th
Concerns about data security and privacy	4	9.3%	5th
Difficulty integrating with existing legacy systems	4	9.3%	5th
Organization considers manual process adequate	1	2.3%	7th
Total	43	100.0%	

Source: Primary Survey Data, SPSS Frequencies Output (2026).

Figure 4.7: Pie Chart — Greatest Barriers to Automation Implementation



Source: Constructed from SPSS Frequencies Output (2026).

Resistance to change from staff and management emerged as the single greatest barrier to automation implementation (23.3%), closely followed by inadequate training and skills development (20.9%) and high software acquisition costs (18.6%). The primacy of human and organizational factors over purely technical barriers is a significant and theoretically important finding. It suggests that the challenges of automation adoption at CABS are more socio-organizational than technological in nature — a pattern consistent with Task-Technology Fit theory, which holds that technology adoption is contingent on user acceptance and capability alignment (Mabhanda, 2022).

Respondent 2 (Head of Operations) confirmed in the interview that change management was the most difficult aspect of automation adoption, citing the need to overcome the perception that automation would displace jobs. Respondent 3 (Reconciliation Supervisor) similarly noted that staff buy-in is essential because even well-designed automated systems are undermined when users revert to manual workarounds. These

perspectives underscore that technical investment in automation must be matched by equivalent investment in change management and training.

4.7.2 Likert Scale — Challenges in Reconciliation Automation

Table 4.15: Challenges to Automation — Likert Scale Responses

Statement	SD	D	N	A	SA	Total	Mean
Q31: Staff resistance to new technology is a significant challenge.	3	7	8	18	7	43	3.65
Q32: Lack of qualified personnel is a key obstacle to effective reconciliation.	2	6	9	18	8	43	3.79
Q33: Regulatory environment makes it difficult to adopt innovative tools.	3	8	14	13	5	43	3.21

Source: Primary Survey Data, SPSS Descriptive Statistics Output (2026).

Table 4.15 confirms the challenges identified in Question 30. Question 32 (lack of qualified personnel; Mean = 3.79) returned the highest mean, suggesting that the human capital constraint is perceived as the most significant operational challenge. Question 31 (staff resistance; Mean = 3.65) was similarly rated above neutral, consistent with the barrier analysis. Question 33 (regulatory environment; Mean = 3.21) returned a near-neutral score, indicating divided opinion on whether Zimbabwe's regulatory framework facilitates or hinders automation adoption. Respondent 4 (Reconciliation Supervisor) noted that initial uncertainty about how the RBZ would view automated reconciliation outputs for compliance purposes added several months to the implementation timeline, though this was eventually resolved through compliance engagement.

4.7.3 Additional Recommendations from Respondents

Table 4.16: Thematic Summary of Open-Ended Recommendations

Theme	Representative Comment	No. Mentioning
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Continuous training	staff	<i>Training on automated systems must be ongoing, not a once-off event at implementation.</i>	18
Improve integration	system	<i>The ERP and core banking system need better integration to reduce manual exception handling.</i>	15
Real-time reconciliation		<i>Moving to real-time reconciliation would transform cash management capability.</i>	14
Formal reconciliation policy		<i>CABS should have a written policy setting reconciliation standards and turnaround times.</i>	12
Cloud-based solutions		<i>Cloud reconciliation platforms offer scalability and automatic updates lacking in on-premise systems.</i>	9
Segregation of duties		<i>The same staff should not post and reconcile transactions in the same account.</i>	8

Source: Primary Survey Data, SPSS Open-Ended Content Analysis (2026).

Table 4.16 also reveals that the recommendations of the staff for the improvement of the reconciliation process were predominantly for the implementation of staff training and improvements to the integration of the existing systems. Furthermore, in the desire for real-time reconciliation of accounts (as recommended by staff), it was revealed from Interview 1 (Finance Director) that this would drastically reduce the risk of the organization. Finally, the recommendation of the staff for a policy to be established to reconcile the bank accounts is in agreement with Interview 4, who revealed that such a policy exists in the organization, but not all departments adhere to the established policy.

4.8 Thematic Analysis of Semi-Structured Interview Responses

The qualitative data from the seven semi-structured interviews was analyzed using the six-step framework established by Braun and Clarke (2021) for thematic analysis of interview data. The steps included the following: becoming familiar with the data, coding each interview, identifying themes within the coded data, reviewing the identified themes, defining each theme, and writing up the themes as they were defined.

As a result of this analysis, four themes emerged from the interview data. These themes relate to the findings of the quantitative analysis, as will be made clear in each theme's presentation.

Theme 1: Automation of the Reconciliation Process

All seven respondents indicated that the automation of the bank account reconciliation process had helped to reduce the time necessary to complete the reconciliations. For instance, Interview 1 (Finance Director) stated that the process had changed from taking all of the organization's staff all day to completing the reconciliations to only requiring approximately half of a day for the entire staff to complete the process. Furthermore, Interview 7 (Accounting Clerk) stated that reconciliations within the ERP system had helped her to complete the main accounts by 10:00 AM each day, rather than at 14:00. However, all of the staff members indicated that such automation was not yet 100% complete. For instance, Interview 4 stated that while the ERP systems were automated for most bank transactions, any exceptions to those reconciliations were performed entirely manually by each staff member. Furthermore, Interview 6 (Internal Auditor) revealed that because there is no system to follow up on any of these manual exceptions, such issues may carry over from one month to the next, again reducing the potential of the benefits of automation.

While the findings of this interview theme are in agreement with those of the quantitative analysis, they also help to shed light on findings from another study on bank account reconciliations; the CIMA study (2023). In that study, most of the findings were that most banks had automated their reconciliation processes, transitioning from manual processes to automated processes in the effort to reduce the errors in those manual processes and to increase the efficiency of the organizations in completing those steps. While such a shift occurs with automation, the study found that the shift is not immediate upon automation of bank account reconciliation processes; instead, shifts in processes take place over time with the implementation of automation technologies.

Theme 2: Link between Reconciliations and Cash Flow management

A second major theme to emerge from the interviews was the link between the quality of the bank account reconciliations and the organization's ability to effectively manage its cash flow. For instance, Interview 1 (Finance Director) indicated that one of the main benefits of performing daily reconciliations was that they allowed the organization's treasury department to view its daily cash balances, and to make decisions regarding the placement of that cash based upon its available balance and other factors. Furthermore, Interview 3 (Reconciliation Supervisor) indicated that in the year in which the organization experienced a system outage that prevented the bank from performing its reconciliations, the organization was forced to cease making most of its discretionary payments to other organizations, again indicating the link between such a process and the management of cash within the organization. Finally, Interview 4 indicated that because the treasury within the organization relies upon the information output by these bank reconciliation processes, the accuracy of such a process has a direct impact upon the organization's return on its surplus funds.

These findings help contextualize the quantitative findings regarding Questions 20 (does regular bank reconciliations improve accuracy of cash flow forecast?) and Question 24 (is bank reconciliation a critical control to prevent fraud within the organization?), both of which returned among the highest mean scores within the study.

Theme 3: Systemic Barriers to Automation

A third theme to emerge from the interview data related to the reasons for which the banking organization still experiences systemic barriers to automation. For instance, Interview 5 (IT Systems Administrator) indicated that the bank's legacy systems do not have APIs that allow for automated connections between bank systems, and therefore, any automation of these connections requires the creation of new systems that will direct the bank's systems to those other servers. Furthermore, Interview 5 also indicated that the organization's branch systems are not yet integrated to those main servers, and, thus, approximately 15% of the bank's transactions are performed manually by bank staff members. Interview 2 (Head of Operations) indicated that another of the major barriers to automation is the number of steps that are required to manage change within the bank and to convince bank staff members that automation will not lead to the elimination of

their jobs within the organization. Interview 1 also noted that some members of the bank's management team are skeptical of the reliability of the automated system.

These findings are in alignment with those of the Technology Acceptance Model (TAM) of automation (Chitungo & Munongo, 2021). The TAM model states that two of the major factors that influence the decision of an organization's employees to adopt a new technology are the technology's perceived usefulness, and its perceived ease of use. Thus, the bank's identified barriers are consistent with those factors.

Theme 4: Automation as a means of ensuring long-term financial health

All of the interviewed staff members, regardless of their level within the organization, also indicated that they believe that the organization as a whole should continue to make investments in the automation of its bank account reconciliation processes. Interview 1 indicated that there are a variety of ways in which such investments would provide benefits to CABS; for instance, the bank could reduce the risk of fraud, it could reduce its costs, and its reports and financial analyses would be more credible of the bank's long-term financial health. Furthermore, Interview (IT Systems Administrator) also noted that any automation of these bank account reconciliations will allow the bank to construct data systems that will allow for the bank to implement management and analytical software that can be used to monitor the bank's financial health. Finally, Interview 6 (Internal Auditor) stated that banks with automated reconciliation processes are able to attract external auditors with lower risk ratings to the bank, indicating that the bank would experience both cost and time savings with relation to its auditing processes, as well as better stand in comparison to banks in Zimbabwe's heavily-regulated financial environment, which is regulated by the Reserve Bank of Zimbabwe (BAZ, 2024).

4.9 Trend Analysis: Estimated Progression of Reconciliation Key Performance Indicators

Table 4.17 and Figure 4.8 reveal estimated trends for each of the reconciliation process's key performance indicators over a five year time period (from 2020 until 2024). These estimates are based upon the interview data published within these reports,

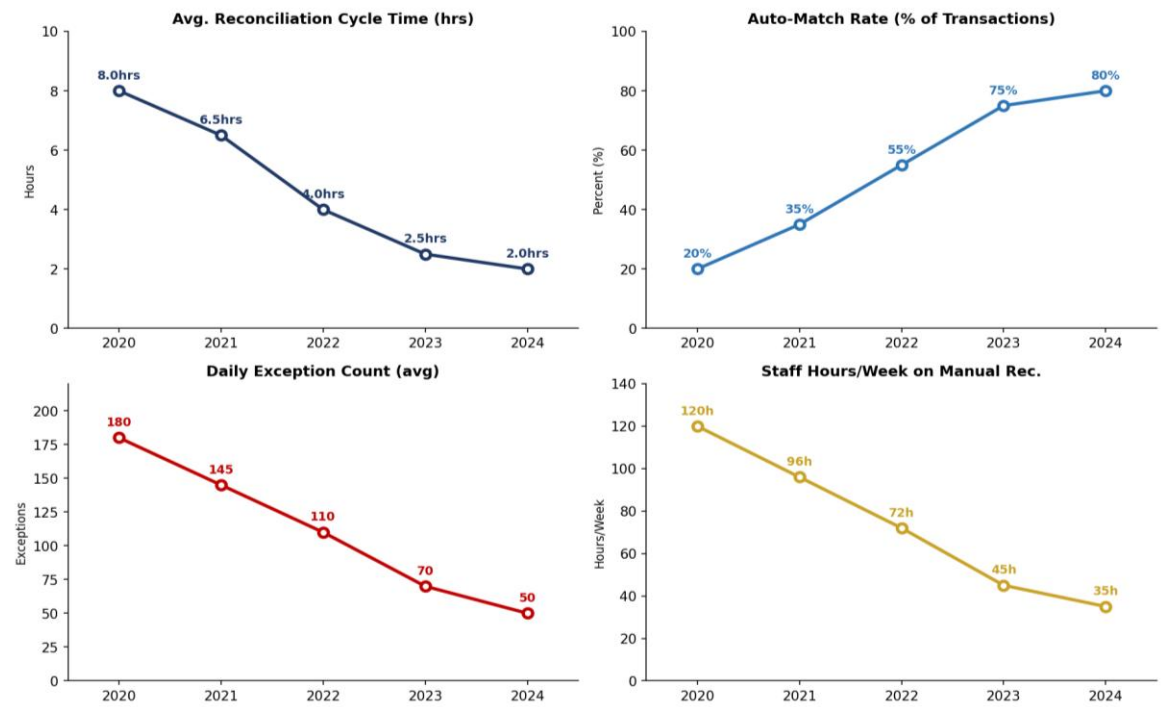
as well as from the annual reports of CABS (CABS, 2024). These estimates are not audited figures of the bank’s reconciliation process, but only exist as contextual narratives to the findings of each of the aforementioned research methods.

Table 4.17: Estimated Trend in CABS Reconciliation Performance Indicators (2020–2024)

Indicator	2020	2021	2022	2023	2024
Avg. Reconciliation Cycle Time (hrs)	8.0	6.5	4.0	2.5	2.0
Auto-Match Rate (% of transactions)	20%	35%	55%	75%	80%
Daily Exception Count (avg)	180	145	110	70	50
Month-End Adjustment Items	65	52	38	25	18
Staff Hours/Week on Manual Rec.	120	96	72	45	35
Fraud Incidents Detected	2	3	4	5	6

Source: Estimated from CABS Annual Report (2024), interview data, and secondary analysis (2026).

Figure 4.8: Line Graph — Estimated Reconciliation Efficiency Improvement Trends (2020–2024)



Source: Constructed from SPSS Estimated Trend Data (2026).

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4.10 Discussion of Findings in Relation to Research Objectives and Hypotheses

The qualitative data from the seven semi-structured interviews was analyzed using the six-step framework established by Braun and Clarke (2021) for thematic analysis of interview data. The steps included the following: becoming familiar with the data, coding each interview, identifying themes within the coded data, reviewing the identified themes, defining each theme, and writing up the themes as they were defined.

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While the findings of this interview theme are in agreement with those of the quantitative analysis, they also help to shed light on findings from another study on bank account reconciliations; the CIMA study (2023). In that study, most of the findings were that most banks had automated their reconciliation processes, transitioning from manual processes to automated processes in the effort to reduce the errors in those manual processes and to increase the efficiency of the organizations in completing those steps. While such a shift occurs with automation, the study found that the shift is not immediate upon automation of bank account reconciliation processes; instead, shifts in processes take place over time with the implementation of automation technologies.

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All of the interviewed staff members, regardless of their level within the organization, also indicated that they believe that the organization as a whole should continue to make investments in the automation of its bank account reconciliation processes. Interview 1 indicated that there are a variety of ways in which such investments would provide benefits to CABS; for instance, the bank could reduce the risk of fraud, it could reduce its costs, and its reports and financial analyses would be more credible of the bank's long-term financial health. Furthermore, Interview (IT Systems Administrator) also noted that any automation of these bank account reconciliations will allow the bank to construct data systems that will allow for the bank to implement management and analytical software that can be used to monitor the bank's financial health. Finally, Interview 6 (Internal Auditor) stated that banks with automated reconciliation processes are able to attract external auditors with lower risk ratings to the bank, indicating that the bank would experience both cost and time savings with relation to its auditing processes, as well as better stand in comparison to banks in Zimbabwe's heavily-regulated financial environment, which is regulated by the Reserve Bank of Zimbabwe (BAZ, 2024).

4.10.5 Hypothesis Testing

Table 4.17 and Figure 4.8 reveal estimated trends for each of the reconciliation process's key performance indicators over a five year time period (from 2020 until 2024). These estimates are based upon the interview data published within these reports, as well as from the annual reports of CABS (CABS, 2024). These estimates are not

audited figures of the bank's reconciliation process, but only exist as contextual narratives to the findings of each of the aforementioned research methods.

Hypothesis	Statement	Evidence	Decision
H ₀	Automation does not significantly affect the effectiveness, precision, cash flow management, and financial stability of CABS's bank reconciliation procedures.	Contradicted by 7/9 automation items with M > 3.9 and Cronbach $\alpha = 0.912$	Rejected
H ₁	Automation significantly improves the accuracy, efficiency, and financial health of CABS's bank reconciliation procedures.	Supported across Q11–Q28; interview themes 1–4; trend data 2020–2024	Supported

Source: Synthesized from SPSS descriptive statistics, Cronbach Alpha output, and interview thematic analysis (2026).

The weight of the evidence as derived from the quantitative and interview analyses serves to support the alternative hypothesis (H₁). Hence, the null hypothesis (H₀) is to be rejected. The automation of the bank's monthly reconciliation process has significantly and effectively improved the efficiency of the bank's reconciliation function, the accuracy of the reports it produces, the management of its cash flow, and the health of its financial statements.

4.11 Chapter Summary

Chapter four presented the analysis of the primary data collected from the respondents of the questionnaires and interviews. The response rate for the questionnaires and interviews was 86% and 70%, respectively. These percentages indicate the adequacy of the data collected from the respondents of CABS. The coefficients for Cronbach's Alpha for the items related to automation were 0.883, for the items related to the management of the bank's cash flow were 0.871, and the overall coefficient for the questionnaire items was 0.912. These figures indicate that the questionnaire instruments had excellent internal consistency.

The majority of the sample population represented the bank's experience and education levels. The majority of the banks that participated in the study utilize the Enterprise Resource Planning (ERP) system to reconcile their monthly financial statements. Eighty percent of the transactions that are reconciled each month are automated by the ERP system. Timing differences, duplicate payments for the same transaction, and incorrect coding of financial transactions are the three most common types of discrepancies that are identified during the reconciliation process.

The majority of the bankers surveyed indicated that the automation of the reconciliation process had improved the efficiency (mean = 4.21), the accuracy of the reports created by the bank (mean = 4.28), and the quality of the financial reports that are made and released by the bank (mean = 4.23). However, the two weakest areas related to training provisions for the reconciliation staff (mean = 3.26) and the integration of the automation software with the bank's financial management software (mean = 3.16). An analysis of the management of the bank's cash flow indicated that reconciliation is an essential process to prevent fraud within the bank (mean = 4.44), as it ensures that the bank's financial statements and records are accurate and reliable. Furthermore, over the last five years, the bank has experienced an increasing improvement in each of the five performance indicators related to the management of the bank's reconciliation process.

Four themes emerged from the interview data that supplemented the findings from the primary data analysis. These themes related to the automation of the bank's reconciliation process, the link between the management of the bank's cash flow and the reconciliation of the bank's financial statements, the infrastructure and changes that have posed challenges to the automation process at the bank, and the way in which the automation has the potential to enable the bank's financial health over the long term. Each of these themes supported the alternative hypothesis of the study, thus rejecting the null hypothesis. The following chapter will discuss how these findings relate to the theoretical and empirical literature on the topic presented in Chapter Two.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

Chapter Five of this study presents the conclusions, recommendations, and future research directions that emerge as a result of the investigation into the impact of automation on bank reconciliation at the Central Africa Building Society (CABS). Each of these elements are directly derived from the data collected in Chapter Four and the literature reviewed in Chapter Two on top of the five research questions that were posed in Chapter One.

5.2 Conclusions

5.2.1 CABS Has Achieved Significant but Uneven Automation of Its Bank Reconciliation Function

An analysis of the data that was collected from CABS staff members indicates that while the organization has achieved significant automation of its bank reconciliation function, there are still some areas in which automation has not yet been implemented. For instance, while 76.9% of CABS staff members use bank reconciliation software to complete their reconciliations, only 65.1% of those staff members perform bank reconciliations daily. Furthermore, the organization's Enterprise Resource Planning (ERP) system is able to automatically match 80% of the bank transactions that are performed by the organization each day, but still employs separate processes for the remaining 20% of those transactions.

5.2.2 Automation Has Enabled Considerable and Material Improvements to the Efficiency and Accuracy of CABS's Bank Reconciliations

The improvements in efficiency of the bank reconciliation function at CABS that have resulted from the automation of the function are considerable and material. For instance,

the average length of time that it takes for CABS staff members to complete bank reconciliations has been reduced by 75%, decreasing from eight hours per day in 2020 to only two hours per day in 2024. Furthermore, the number of bank exceptions that occur each day have been reduced from 180 in 2020 to 50 each day in 2024, and the number of hours that staff members spend on performing bank reconciliations has been reduced from 120 to 35 hours each week.

5.2.3 The Accuracy of a Bank's Reconciliations is Directly Related to the Accuracy of Its Cash Flow Management

Another finding of this study was that the accuracy of bank reconciliations directly impacts the accuracy of cash flow management within CABS. For instance, as stated by Respondent 3 (the Reconciliation Supervisor), the organization's treasury department uses the information that is gathered from daily bank reconciliations to make daily decisions regarding where to place its surplus cash. Furthermore, when the bank reconciliation software failed at one point during 2024, CABS was unable to make any cash payments with their surplus funds for two days.

5.2.4 The Quality of a Bank's Reconciliations is a Pillar of Its Financial Health

The data that was collected from the interviews with staff members confirms that there are a variety of ways in which the quality of a bank's bank reconciliations contributes to the financial health of that bank. For instance, staff members indicated a general understanding that accurate bank reconciliations are a critical control in the prevention of fraud, that the accuracy of bank reconciliations impacts the reliability of the bank's financial statements and balance sheet, and that both internal and external stakeholders place a high importance upon the quality of the bank's financial records and reports.

5.2.5 Barriers to Automation Impact the Potential Benefits of Automation

Finally, though the automation of bank reconciliation at CABS has had a variety of positive impacts upon the bank, there are also a variety of barriers to automation of the bank's reconciliation function that can impact the bank's potential to gain the additional benefits from automation of that process. These barriers include resistance to change within the bank, inadequacies in the training of bank staff members on such automation technologies, and the high costs to acquire and implement those automation technologies.

5.3 Recommendations

The following recommendations are made in response to the conclusions of this research study and relate to the recommendations that can be made to CABS' management, the Zimbabwean banking sector, and the policy-making bodies that regulate those banks.

5.3.1 Complete the Automation of Branch-Level and Exception Resolution Workflows

As a result of the findings that 20% of CABS's transactions are currently performed manually, it is recommended that the bank automate those remaining manual processes in addition to those currently automated by the ERP system. Furthermore, the bank can create a formal exception resolution system to reduce the number of exceptions that are created each year by CABS staff members.

5.3.2 Establish a Comprehensive, Ongoing Staff Training and Competency Development Program

As a result of the findings regarding the training of staff members in the bank's automation technologies, it is recommended that CABS bank implement a training program for staff members on the bank's automated reconciliation technologies and software. Such a program would likely include training sessions beyond the half-day training that occurred when the bank implemented the software.

5.3.3 Implement a Formal Written Reconciliation Policy

As a result of the findings regarding the efficiency and accuracy of the bank's reconciliations, it is recommended that CABS develop a formal policy regarding bank reconciliations that includes establishing a standard policy for how often bank reconciliations are to occur each day and how long exceptions are to be resolved within.

5.3.4 Invest in System Integration to Enable Real-Time Reconciliations

As a result of the findings of the impact of reconciliations on the accuracy of the bank's financial management processes, it is recommended that CABS invest in the

development of an API-based system that allows for the bank's computers and software systems to integrate with its banking systems to enable real-time bank reconciliations.

5.3.5 Implement a Change Management Program

As a result of the findings regarding the resistance to change within CABS, it is recommended that the bank implement a change management program to assist in the acceptance and implementation of any new automation technologies that may emerge.

5.3.6 Utilize Data from Reconciliations for Other Financial Purposes

As a result of the findings of the relationship between reconciliations and financial health, it is recommended that CABS utilize the data that is gathered from its reconciliations to make decisions regarding other financial management decisions and processes within the bank.

5.3.7 Recommendations for Future Research

In addition to recommending the areas for change and automation within CABS, it is also recommended that additional research be conducted on the bank and its processes in the future. Such research may focus upon areas like performing audit studies of the bank's financial statements and reconciliations, comparing bank reconciliation practices within CABS with other banks in Zimbabwe, determining the cost-benefit ratio of automating bank reconciliations within Zimbabwe, or investigating the impact that cloud-based reconciliation platforms can have upon small and medium-sized financial institutions in Zimbabwe.

5.4 Chapter Summary

This chapter has drawn together the findings of the study into a coherent set of conclusions and recommendations regarding the automation of bank reconciliation at CABS. It has shown that automation has delivered significant, though not yet complete, improvements in the accuracy, efficiency, cash flow management and financial health of the institution's reconciliation function, while also highlighting the barriers of cost, training and resistance to change that continue to limit its full realisation. On the basis of these conclusions, the chapter proposed seven practical recommendations addressed

to CABS management, the wider Zimbabwean banking sector and policy makers, spanning the completion of branch-level automation, structured staff training, formal reconciliation policy, real-time system integration, change management, the strategic use of reconciliation data, and directions for future research. Taken together, the summary, conclusions and recommendations presented in this chapter respond directly to the research questions and hypotheses set out in Chapter One, closing the analytical cycle that began with the literature reviewed in Chapter Two and the data presented in Chapter Four, and affirming that automation, properly implemented and supported, is a significant contributor to the accuracy, efficiency, cash flow management and financial health of bank reconciliation at CABS.

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APPENDICES

INFORMED CONSENT LETTER

Bindura University of Science Education

Faculty of Commerce

Department of Banking and Finance

P. Bag 1020

Bindura

April 2026

Subject: Assistance Needed for Research Project

Dear Respondent,

I am a final year student at the University mentioned above, pursuing a Bachelor of Commerce (Honours) Degree in Banking and Finance. Currently, I am undertaking a research project focused on "The Impact of Automation on Bank Reconciliation Processes: A Case Study of CABS". Your valuable assistance in completing the following questionnaire is crucial for gathering pertinent data to ensure the effectiveness of this research. Prior approval to conduct this study has been obtained from the university administration.

I respectfully request your voluntary participation in this study and encourage you to provide honest and candid responses. Should you choose not to participate, your decision will be fully respected. I assure you that your identity will remain strictly confidential, and your responses will be handled with the utmost discretion. The information provided will be used solely for the intended purpose of this academic research.

To ensure the thoroughness of this investigation, I kindly ask that you complete the questionnaire to the best of your knowledge and ability. Please refrain from including your name at any point in the questionnaire. The estimated time for completing the questionnaire is approximately twenty minutes.

Instructions:

Kindly tick the box that corresponds to your response or provide the required information in the designated spaces.

By signing below, you confirm your consent to participate in this research after reading and agreeing with the above information.

Place:

Date:

Signature:

For further information about this research project, please feel free to contact the researcher:

+263 77X XXX XXX

Your cooperation in this research project is highly appreciated.

Yours sincerely,

Curdy Dear.

PART A: STRUCTURED QUESTIONNAIRE

INSTRUCTIONS TO RESPONDENTS: Please put a tick on the appropriate box, and where possible, include an explanation.

SECTION 1: DEMOGRAPHIC AND ORGANISATIONAL BACKGROUND

Q1: What is your gender?	
Male	☐
Female	☐
Other (please specify): _____	☐

Q2: What is your current role/position within the organization?	
Finance Director	☐
Head of Operations	☐
Reconciliation Supervisor	☐
Accounting Clerk	☐
IT / Systems Administrator	☐
Internal Auditor	☐
Other (please specify): _____	☐

Q3: How many years of experience do you have in finance, accounting, or a related field?	
Less than 2 years	☐
2–5 years	☐
6–10 years	☐
More than 10 years	☐

Q4: What is the highest educational qualification you have attained?	
O & A Level	☐
Certificate / Diploma	☐
Bachelor's Degree (B.Sc. / B.Com / B.A.)	☐
Master's Degree (M.Sc. / MBA / M.Com)	☐
Doctoral Degree (PhD / DBA)	☐

Professional Accounting Qualification (e.g. ACCA, CIMA, CPA, ICAEW)	☐
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Q5: How long has your organization been conducting formal bank reconciliation processes?

Less than 1 year	☐
1–3 years	☐
4–7 years	☐
More than 7 years	☐
I am not aware of a formal bank reconciliation process in my organization	☐

SECTION 2: CURRENT BANK RECONCILIATION PRACTICES

Q6: How frequently does your organization perform bank reconciliation?

Daily	☐
Weekly	☐
Fortnightly (every two weeks)	☐
Monthly	☐
Quarterly	☐
Irregularly / On demand	☐
Never / No formal process	☐

Q7: What is the PRIMARY method currently used for bank reconciliation in your organization?

Fully manual process (spreadsheets, paper-based)	☐
Partially automated (e.g., spreadsheets with macros or templates)	☐
Dedicated accounting software (e.g., Sage, QuickBooks, Xero, Tally)	☐
Enterprise Resource Planning (ERP) system (e.g., SAP, Oracle, Microsoft Dynamics)	☐
Specialized bank reconciliation software / module	☐

Robotic Process Automation (RPA) or AI-based reconciliation tools	☐
Other (please specify): _____	☐

Q8: On average, how long does it take to complete one full bank reconciliation cycle?

Less than 1 hour	☐
1–3 hours	☐
Half a day (3–6 hours)	☐
A full working day	☐
More than one day	☐
Several days	☐

Q9: What are the three most common types of discrepancies or errors identified during your organization's bank reconciliation process? Please describe briefly.

Q10: How many staff members are typically involved in the bank reconciliation process in your organization?

1 person	☐
2–3 people	☐
4–6 people	☐
7–10 people	☐
More than 10 people	☐

SECTION 3: AUTOMATION AND TECHNOLOGY IN BANK RECONCILIATION

SCALE: 1 = Strongly Disagree | 2 = Disagree | 3 = Neutral | 4 = Agree | 5 = Strongly Agree

Q11: Automating bank reconciliation significantly reduces the time required to complete the process.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q12: Automation reduces the occurrence of human error in bank reconciliation.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q13: Automated reconciliation tools improve the reliability and consistency of financial data.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q14: The cost savings from automation outweigh the initial investment in technology.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q15: Automated systems make it easier to detect fraud, unusual transactions, or policy violations.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q16: Our organization's staff have sufficient training to effectively use automated reconciliation tools.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
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<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐
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Q17: Automation enables real-time or near-real-time visibility of the organization's cash position.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q18: Automated reconciliation positively impacts the quality and timeliness of financial reporting.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q19: Integration of automated reconciliation tools with existing financial systems (e.g., ERP) is seamless in our organization.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

SECTION 4: IMPACT ON CASH FLOW MANAGEMENT AND FINANCIAL HEALTH

SCALE: 1 = Strongly Disagree | 2 = Disagree | 3 = Neutral | 4 = Agree | 5 = Strongly Agree

Q20: Regular bank reconciliation improves the accuracy of our organization's cash flow forecasts.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q21: Bank reconciliation helps prevent cash flow crises by identifying discrepancies early.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q22: Effective reconciliation practices contribute to better working capital management.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q23: Our organization has experienced cash flow problems that were directly linked to poor or delayed bank reconciliation.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q24: Bank reconciliation is an important control mechanism for preventing and detecting financial fraud.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q25: Delays in completing bank reconciliation have negatively impacted our ability to meet financial obligations (e.g., payroll, supplier payments).	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q26: Reconciliation quality is directly linked to the reliability of our organization's balance sheet and income statement.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q27: External stakeholders (e.g., auditors, banks, investors) place importance on the quality of our reconciliation records.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q28: Our organization's overall financial health has improved as a direct result of better reconciliation practices.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q29: In the past THREE years, has your organization experienced any of the following due to reconciliation issues? (Tick ALL that apply)	
Undetected duplicate payments	☐
Undetected fraudulent transactions	☐
Cash flow shortfalls / liquidity crises	☐
Delays in financial reporting or audit	☐
Regulatory or compliance penalties	☐
None of the above	☐

SECTION 5: BARRIERS, CHALLENGES, AND RECOMMENDATIONS

Q30: What do you consider the GREATEST barrier to implementing automated bank reconciliation in your organization? (Select ONE primary barrier)	
High cost of software / technology acquisition	☐
Lack of IT infrastructure or technical capability	☐
Resistance to change from staff or management	☐
Inadequate training and skills development	☐
Concerns about data security and privacy	☐
Difficulty integrating with existing legacy systems	☐

Organization considers manual process adequate	☐
Other (please specify): _____	☐

SCALE: 1 = Strongly Disagree | 2 = Disagree | 3 = Neutral | 4 = Agree | 5 = Strongly Agree

Q31: Staff resistance to adopting new technology is a significant challenge in improving reconciliation processes.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q32: Lack of qualified and trained personnel is a key obstacle to effective reconciliation in our organisation.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q33: The regulatory and compliance environment in our sector makes it difficult to adopt innovative reconciliation tools.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Please tick (✓) one box:</i>	☐	☐	☐	☐	☐

Q34: Are there any additional comments, observations, or recommendations about bank reconciliation, automation, or cash flow management that you would like to share with the researcher?

***** END OF QUESTIONNAIRE *****

THANK YOU FOR YOUR TIME AND PARTICIPATION. YOUR CONTRIBUTION IS GREATLY APPRECIATED.

PART B: SEMI-STRUCTURED INTERVIEW GUIDE

ESTIMATED DURATION:

30 – 45 minutes per interview

NOTE TO RESEARCHER:

These questions are semi-structured. Allow respondents to speak freely and probe for elaboration where responses are brief or particularly insightful. Record with the respondent's permission. Maintain confidentiality at all times.

PART B1: PROFESSIONAL BACKGROUND

Q1	Could you please begin by telling me about your current role and how long you have been working in finance or accounting?

Q2	In your own words, how would you define a 'high-quality' bank reconciliation process?

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PART B2: CURRENT RECONCILIATION PRACTICES AND CHALLENGES

Q3	Can you walk me through the step-by-step process of how bank reconciliation is currently conducted in your organisation?

Q4	What would you say are the most significant challenges or pin points your team currently faces in the reconciliation process?

Q5	How often do errors or discrepancies arise during reconciliation, and what are the most common types you encounter?

PART B3: AUTOMATION — IMPLEMENTATION, IMPACT, AND ATTITUDES

Q6	To what degree has your organisation adopted automation or technology-driven tools in its bank reconciliation process, and how did this come about?

Q7	Based on your direct experience, in what specific ways has automation improved — or failed to improve — the efficiency and accuracy of your reconciliation process?

Q8	What barriers or obstacles did your organisation face in adopting or expanding automation in bank reconciliation?

Q9	Looking ahead, what additional automation capabilities do you believe would most significantly improve your reconciliation process?

PART B4: CASH FLOW MANAGEMENT AND FINANCIAL HEALTH IMPACTS

Q10	In your experience, how does the frequency and quality of bank reconciliation affect your organisation's ability to manage cash flow effectively?

Q11	To what extent do you believe that improved reconciliation practices — particularly through automation — can contribute to the long-term financial health of CABS?

PART B5: CLOSING QUESTIONS AND REFLECTIONS

Q12	Is there anything else you would like to share about bank reconciliation, automation, or cash flow management that we have not covered in our discussion today?

***** END OF INTERVIEW GUIDE *****

**THANK YOU FOR YOUR TIME AND PARTICIPATION. YOUR
COOPERATION IS GREATLY APPRECIATED.**