

**EFFECTS OF MANAGEMENT OF CASH FLOW ON PROFITABILITY OF
COMMERCIAL BANKS IN KENYA**

BY

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**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF DEGREE IN MASTER OF BUSINESS
ADMINISTRATION OF THE UNIVERSITY OF NAIROBI.**

OCTOBER, 2022

DECLARATION

This research project is my own original work, and it has not been submitted for evaluation or academic award to any other institution of higher learning.

Signature  Date 01/11/2022

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D61/11158/2018

This research project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

This research project is dedicated to my family for their inspiration, encouragement, and provision of the much-needed emotional and psychological support.

ACKNOWLEDGEMENT

I wish to express my gratitude to God the almighty for health, wisdom and protection during this exercise. I appreciate and acknowledge with profound gratitude my supervisor; Prof. Josiah Aduda for his tireless supervision, advice, great patience and encouragement during the exercise. I will forever be indebted. Thank you for your professional support and input.

I am also grateful to Nairobi University for admitting me into a Master Degree Programme and to all the staffs in the Department of Finance for the knowledge and skills they imparted to me.

To all those who participated in one way or the other to make this a success and have not been mentioned here I say thanks from the bottom of my heart.

Last but not least I thank my colleagues in the masters' class who served as a source of encouragement in times of hardship like, God's blessings be upon you.

ABSTRACT

The practice of management of cash flow is becoming increasingly popular in Kenya as a result of the multiple benefits it offers. Numerous corporate entities in Kenya are implementing cash management models in an effort to ensure well-organized cash management that will result in enhanced financial success for all parties involved in the firm. The purpose of this project was to assess the consequence of management of cash flow on commercial banks profitability in Kenya. This study was hinged on Cash Conversion Cycle Theory, Baumol Model, Free Cash Flow Theory as well as the model of Miller-Orr and was guided by descriptive design and targeted 40 commercial banks operating in Kenya for secondary data. The data was analyzed through descriptive statistics of which percentages, mean and frequencies as well as multiple linear regression. The result indicated that management of investing cash flow, operating management of cash flow and free management of cash flow influenced significantly and positively on the profitability of the commercial banks, while others had a negative effect on banks such as financing management of cash flow. Some of the Recommendations from this study included that commercial banks through their management should raises resources for investment, encourage investing cash and come up with sound cash management policies that will bring more confidence to investors and shareholders to invest more in their financial business. Moreover, banks should have adequate operating and free cash for optimal operation of their activities that would eventually positively influence their profitability, but minimise on the financing cash.

TABLE OF CONTENTS

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	v
TABLE OF CONTENTS	vi
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background of the Study	1
1.1.1 Management of cash flow	3
1.1.2 Profitability of Commercial Banks	5
1.1.3 Management of cash flow and Profitability	6
1.1.4 Commercial Banks in Kenya	7
1.2 Research Problem	8
1.3 Research Objectives	10
1.4 Value of the Study	10
CHAPTER TWO: LITERATURE REVIEW	12
2.1 Introduction	12
2.2 Theoretical literature Review	12
2.2.1 Cash Conversion Cycle Theory	12
2.2.2 Free Cash Flow Theory	13
2.2.3 Baumol Model	14
2.2.4 Miller-Orr Model Theory	15
2.3 Determinants of Profitability of Commercial Banks	16
2.3.1 Management of cash flow	16

2.3.2 Management of cash flow for Operating activities	17
2.3.3 Management of cash flow for financing activities	17
2.3.4 Free Management of cash flow	18
2.4 Empirical Literature Review	19
2.5 Summary of Literature Review and Research Gaps	23
2.6: Conceptual Framework	25
CHAPTER THREE	27
RESEARCH METHODOLOGY	27
3.1 Introduction	27
3.2 Research Design	27
3.3 Target Population	27
3.4 Data Collection	27
3.5 Diagnostic Tests of Secondary Data	28
3.5.1 Multicollinearity	28
3.5.2 Test Normality	28
3.6 Significance Test	29
3.6.1 F-tests	29
3.7 Data Analysis	29
3.7.1 Empirical model	30
3.7.2 Significance Test	31
CHAPTER FOUR RESEARCH FINDINGS AND DISCUSSION	32
4.1 Introduction	32
4.2 Diagnostic Tests Results	32
4.3 Descriptive Statistics	34
4.4 Results of Regression Analysis	38

4.5 Discussion of the Findings 40

CHAPTER FIVE 44

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS 44

5.1 Introduction 44

5.2 Summary of the Study 44

5.3 Conclusions 45

5.5 Limitations of the Study 47

5.6 Areas for Further Research 48

References 49

APPENDICES 54

Appendix I List of Commercial Banks 54

Appendix II: Data Collection Tool 56

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Management of cash flow has been a significant component of the operational strategy in any organization and hence is crucial to the functioning and financial performance of any business with both short- and long-term financial goals (Efobi, 2008; Quinn, 2011). Uwonda & Okello, (2013) similarly asserts that improved financial performance is closely tied to a business's management of cash flow framework, which controls the company's assets, including cash and bank balances, creditors, stocks and debtors.

Further, Uwonda and Okello (2013) explains that despite the significance roles management of cash flow play in business operations, managing cash flow continues to be a challenge for business leaders because they pay little attention to it and are unaware of the influence of cash shortages on return on assets, equity, and corporate operations. For instance, Kroes and Subramanyam (2012) examined the nature of correlation that exists between a business' progress and performance and the quantity of cash inflows and outflows from its operations as a result of its inability to secure money to sustain operations. Kroes and Subramanyam found that to meet financial obligations, a business is required to get finance from lending organizations or liquidate its assets of which failure to come up with adequate funds on time results in insolvency, collapse or at worse the business shutdown.

Ebben and Johnson (2011) similarly explains that managing or controlling cash flow of a business institution can help improve success of a business in terms of profitability and while majority of scholars who looked for the association between financial performance and management of cash flow analyzes in a stationary point of view, the stationary perspective has led to abundance of understanding into the critical aspects of effective and successful

management of cash flow and performance. Financial institutions in Kenya have continuously made billions of shillings in profit and have improved their financial situation. Also, (Nguyen and Thanh 2013) examined the banking effect correlation with the success of Vietnamese businesses and found that in order for a corporation to accomplish its financial performance objective, it must design the most effective management of cash flow approach for classifying and deciding on the most successful revenue components. Similarly, management of cash flow choices might as well lead to a business's failure. For instance, Thanh and Nguyen (2013) proceeded by adding that as a result of inadequate and lax governance in managing money flows, managers are more likely to engage in and prioritize their own interests over those of the management and shareholders. Therefore, there exist a strong and favorable correlation between management of cash flow and business performance. Due to the divergent opinions of previous studies, a blind zone has developed that necessitates additional observation and analysis of the association between profitability performance and management of cash flow among the commercial financial institutions in Kenya.

This study was anchored on Cash Conversion Cycle Theory, Baumol Model, Free Cash Flow Theory as well as the model of Miller-Orr. Cash Conversion Cycle Theory in the present study helps in demonstrating the impact of the duration of a cash conversation cycle on the performance of a business organization and hence is significant in evaluating the effect of management of cash flow on the profit making ability of commercial banks operating in Kenya. The Free Cash Flow Theory guides the study through the understanding of the importance of minimization of conflicting interest among management and stakeholders in order to provide competent and effective management of cash flow models that maximize wealth and resources. The theory also provides support for the shareholder's return by detailing how cash flow ought to be controlled in order to safeguard the value of investments.

On Baumol Model, the theory explains the notion that commercial financial institutions have a continuous cash stream and that the opportunity cost of short-term marketable securities is predictable and constant, this theory has application in the present. In this way, the model predicts that the optimal cash balance maintained by a commercial bank in Kenya will have a one on one influence on bank's financial performance assessed by profitability ratios. Finally the Miller-Orr Model Theory through investing management of cash flow explains how commercial banks in the business's immediate vicinity are responsible for maintaining a standard level of cash flows in the organization. Commercial companies' management will do everything in their ability to keep cash flows within a normal range whenever cash flows fall below the lower limit

1.1.1 Management of cash flow

Due to the strict local and global financial markets, as well as the general public's reduced willingness to invest in company stock as a result of last year's crash in the stock market, the availability of business financing has become a chief source for concern for firm owners, mainly following the financial crisis globally (Bashir, 2006). Consequently, managers are compelled to devise a variety of strategies for managing internal income and expenditure in order to increase their prospects for profit and to meet the expectations of shareholders under these circumstances.

A business organization's ability to maintain short-term commitments depends on the company's ability to maintain sufficient cash receivables and cash outflows at all times. Quick ratio (QR) and current ratio (CR) are the two most commonly used measures to assess a company's cash flow and are two of the most important measures to consider. Using the current ratio will tell you how much money you have in your current assets and current

liabilities. The ability to meet short-term commitments in a timely manner is demonstrated by the current rise in interest rates. This is standard across most industries and accounts (Berk, 2009). In financial accounting, the asset-liability ratio measures how quickly assets can be converted into cash or other short-term liquidity. For an asset to be considered liquid, it must be convertible into cash immediately or within a reasonable time. A corporation's inability to make timely payments to creditors and providers of loans, services, and products is caused by a lack of liquidity. This could result in losses as a result of a shortage of suppliers, which could finally result in insolvency of the company. When a firm is not capable of fulfilling its short-term commitments, another potential is that the company's operations and reputation will suffer (Chakraborty, 2008).

Furthermore, a lack of cash or liquid assets may impede a firm from taking advantage of credit, service, and product incentives. If these incentives are removed, it is possible that the cost of items would rise, which will have a negative influence on the company's profitability (Deloof, 2003). Every stakeholder has a vested interest in a company's aptitude to take care of its financial responsibilities. Suppliers will perform a credit check on the company before allowing it to sell things on credit to customers. It is important for employees to keep an eye on company liquidity and determine whether the company is able to meet employee-related obligations such as wages and pensions. As a result, a corporation's liquidity must be sufficient (Farris, 2002).

When a corporation is profitable, the gap between its revenues and expenses is referred to as the profit margin. When it comes to a financial manager, he or she must ensure that the business organization has adequate cash flow to take care of its bills, has enough cash to make unanticipated bulky purchases, and has a good cash stash to cope with crises on the one hand, and that the business conversely has sufficient cash to take care of its bills

(Lamberson, 1995). In this study, management of cash flow is measured by investment management of cash flow, financial management of cash flow, operating management of cash flow, and free management of cash flow.

1.1.2 Profitability of Commercial Banks

In business, profit making ability is the capacity of an organization's, or firm's to generate profits from all of its business undertakings. It rates management's success in increasing the value of the company's resources while keeping costs under control (Ebben & Johnson, 2011). However, the ability to make profit can be quantified with respect to profit and its link to these criteria, despite the fact that there are several variables that can sway profit. Essentially, profitability is a correlation between income and some balance sheet indicator that reflects a business's ability to create income from its invested capital. Profitability, although its importance, may be prone to errors such as the application of different accounting standards and the exploitation of financial transactions to "window-dress" Company's financial situation (Crabtree and DeBusk, 2008).

The question of bank profit making aptitude and efficiency has been addressed in the systematic literature, and a range of theoretical and empirical research have been done on the subject in recent years. The profitability ratios (ROE and ROA) of a bank have long been used to measure the success of the bank. Many people disagree on whether or whether profitability indicators, such as net income before tax as a fraction of total assets or capital and reserves issues, are influenced by the bank's internal elements, such as capital and reserves issues (Morris, 2011).

Management can be evaluated on their capacity to generate profits from the bank's revenue-generating sources by examining profit ratios. The gross profit margin and net profit margin of a bank are used to determine the profitability of the institution (Johnson, 2008). The pre-

tax profit is the amount of money earned by a firm before expenses such as administration, salaries, and other expenses are removed. Generally speaking, net profit is the amount of money that is left over after deducting all of the expenses involved with the bank's operations, together with any other relevant expenses (Keeley, 1990). Win rate is a metric that evaluates a company's ability to generate profit from its business.. Also demonstrated is the company's ability to weather economic downturns, fend off competitors, and learn from its missteps.

1.1.3 Management of cash flow and Profitability

In addition to the management of cash flows, commercial bank managers must also consider the measurement of their demands as they apply to the deposit and loan process. Always, a shortage of liquidity at one bank can have a cascading effect throughout the financial system (CBK, 2009). Several studies have found that banks are hoarding enormous quantities of cash assets at the price of spending that money in more profitable ventures (Kamau, 2009). When a bank changes from their securities or credit facilities, its return increases, but its liquidity risk increases as well, highlighting the trade-offs that are in between return and risk in the financial markets. Because of this, a bank with an elevated liquidity ratio is less dangerous and at the same time pose less profit to the business (Hempel et al, 1994).

In this situation, management is forced to choose between profitability and cash flow. As Myers and Rajan (1998) point out, rising cash receivables for financial institutions might have a negative impact on business administration's capacity to obligate convincingly to an investment proposal that is designed to protect investors. It is possible that this will reduce the firm's ability to raise external funding, resulting in a reduced overall return on equity for investors in the long run, as a result of the previous point (Uzhegova, 2010). Kenyan

legislation stipulates that this percentage must be maintained and always be regulated by CBK.

There are many financial watchers who are perplexed as to how banks were able to conserve such large sums of money in a credit-starved economy like Kenya (Kamau, 2009). According to Kamau (2009), the limitations and constraints that have continuously positioned commercial financial firms at a concession window, combined with a paltry bank to bank market, unfavourable reserve conditions, and the banking sector's preference for investing in less risky government bonds, have resulted in a liquidity problem for the financial sector. The Kenyan banking system provides an ideal case study for scrutinising on how management of cash flow sway the profit making capacity of on the Kenyan banks.

1.1.4 Commercial Banks in Kenya

A bank is a company which performs or aspires to conduct banking transactions in the country of Kenya. In order to do so, these financial institutions participate in deposit taking, credit facility provision, financial remittances, and a wide range of other financial services. A critical role in the fiscal sector is played by the banking industry, which places a high priority on the mobilization of savings while also supplying loans to businesses and individuals in need of credit. According to a yearly report by Bank supervision (2019), it is the Central Bank's responsibility to guarantee that commercial banks operate within the limitations of the financial parameters established by them in their capacity as a regulatory authority.

During the past few years, Kenya's financial institutions have experienced rapid growth and development in terms of loan levels. As a consequence of the application of new technology as well as various financial discoveries and innovations, the country's commercial banks have experienced rapid growth in terms of loan levels (Irungu, 2013). In response to the expansion of this industry, the emergence of new services and products has augmented the convenience,

accessibility, and adaptability of financial services. Currently, the Banking Act as was enacted by the parliament controls the banking industry in Kenya, which also contains a prudential framework and guiding principles . As a cognizant to the fact that the banking industry is extremely important in determining the Kenya's economic progress, the financial policies governing the industry will have a substantial influence on the market value of the bank, its stock returns, which are measured by both present and future earnings per share, the stock prices, returns on investment, and the capital structure adopted by the bank (Lilian, Mungai & Eddie, 2014).

Through the granting of credit to a wide range of enterprises and investors, Kenyan commercial financial institutions play an essential function in mobilizing funds for investment in the country. Lending is at the integral part of the banking sector, and credit facilities are the most valuable resources because they account for the lion's portion of total operational revenue generated. Loans, on the other hand, subject the financial institutions to the largest amount of risk. Kenya has 40 commercial banks that are licensed to operate, as well as one home finance firm. Thirty-two of the 40 financial organisations are held by local investors, while thirteen are owned by international investors. As a result of the many financial activities in these commercial financial institutions, banks need to properly manage investment cash flow, financing cash flow, operating cash flow, and free cash flow. Therefore, this study seeks to assess how these activities, as components of management of cash flow, affect the profitability of Kenya's commercial banks.

1.2 Research Problem

The practice of management of cash flow is becoming increasingly popular in Kenya as a result of the multiple benefits it offers. Numerous corporate entities in Kenya are implementing cash management models in an effort to ensure well-organized cash management that will result in enhanced financial success for all parties involved in the

firm. The concept of management of cash flow and profitability is therefore critical to the development, survival, sustainability, growth and performance of any business organization.

It is conceivable for a corporation to be profitable while yet being insolvent at the same time.

So cash flow needs to be managed to acquire an ideal amount that prevents excess liquidity that could result in management running out of ideas. Moreover, the level of cash assets should not go below the basic least required because this will lead to the organization's incapacity to take care of short-term obligations that are due. Banks are coming up with a range of approaches to advance their liquidity status in order to attain this objective.

There are a number of commercial financial institutions within the country Kenya that are threatened by the current cash and credit crunch, which is putting their very survival in jeopardy. Because of this, it is unquestionable that commercial banks cannot function well if they do not have adequate management of cash flow. Commercial banks will be better able to ensure that their businesses can continue to operate with adequate cash flow to take care of both maturing short-term debt and imminent operating expenses once they realize that managing their cash flows necessitates making short-term choices about operational capital with an intention of financing all liabilities.

The reality is that, despite the fact that management of cash flow is a critical component of the successful functioning of commercial enterprises, it has gotten little attention from academics. For instance, Alslehat and Al-Nimer (2019) investigated how Jordan's 23 insurance businesses fared financially as a result of their use of management of cash flow techniques, Hamza, Mutala and Antwi (2018) also investigated how cash management methods sway financial progress of SMEs in Ghana's Northern Region, Eton et al. (2019) investigated how management of cash flow affects business performance in the Lira district of Uganda, while an investigation conducted by Amah, Micheal and Ihendinimu (2017)

looked into how cash flow impacted the financial success of publicly traded banks in Nigeria. Locally, Kemboi (2019) looked into how investment cash flows impact companies on the Nigerian Stock Exchange (NSE) that had been in operation for the period 2012-2018, while Ndungu and Oluoch (2019) employed a descriptive research approach to investigate on how financing flow management influence market performance. Despite the existing literature containing several studies on the relationship between management of cash flow and corporate financial performance, there are no studies in Kenya that touch on the relationship between management of cash flow and profitability of commercial financial institutions. Therefore, the driving force behind the current research is to provide an answer to the research question of how management of cash flow affects the profitability of commercial banks in Kenya.

1.3 Research Objectives

An assessment of the impact of management of cash flow on the profitability of commercial banks in Kenya.

1.4 Value of the Study

It is envisaged that this study would assist to the strengthening of the banking system by providing information on the management of cash flow policies of Kenyan commercial banks and how these policies relate to the profitability of the institutions. Businesses in Kenya can utilize the information to enhance their manner of delivery, so strengthening their position in the marketplace relative to other financial institutions, notably microfinance institutions, and thereby increasing their profits (MFIs).

Financiers, cash flow managers, and cost structure managers all play a crucial part in the management of their bank's cash flow and cost structure, which is important so as to drive bank

performance and maintain the viability of the business organization. The management of cash flow will be explored in this study in order to evaluate whether banks can achieve good performance if their cash flow is handled and controlled efficiently.

Researchers will benefit from the findings since it will help them improve the existing literature on management of cash flow strategies in Kenya and provide them greater direction when filling in the gaps in future studies, which will be a direct effect of the findings. Results of this research can be utilized to assist finance managers in financial institutions in making investment decisions that will fulfil the interests of all stakeholders, including the cash flow and profitability requirements of the investors, in order to maximize returns on their investments. When managers are able to identify the management of cash flow strategies that will optimize earnings, they can alter and implement the proper techniques to achieve success.

Additionally, the authorities directly observe the types of management of cash flow employed by profitable financial institutions. These insights help develop rules and regulations that help reduce the likelihood of default in the industry. In addition, this research contributes to the state of knowledge about finance and provides further information about how banks work.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

In this section, literatures comprising of both the theories informing the study and the previous empirical studies on management of cash flow, as well as the predictors of profitability of organizations are highlighted. The section similarly provides the conceptual model, before concluding with a summarized literature reviewed.

2.2 Theoretical literature Review

The theory that helped explain the management of cash flow considered in this study is the free cash flow model. This model explains that in any organization it is the responsibility of management to make and control investment decisions. The study is also based on the cash conversion theory, which hypothesizes that longer cash conversion cycles lead to better business performance. Other theories that have influenced this work are the Baumol model, adopted by Baumol in 1952, and the Miller-Orr model.

2.2.1 Cash Conversion Cycle Theory

In 1974, Gitman postulated this concept, which asserted that a stretched cash conversion cycle leads to improved financial performance. It is vital for every corporate organization to understand the cash conversion cycle, since it allows them to calculate the amount of money they require. Cash inflows and procurement of materials and as a consequence of sales of finished items are the most significant aspects to consider when thinking about how a cash

conversion cycle works. It is vital to evaluate the cash conversion cycle of each individual unit inside a firm so as to grow the financial progress and performance of the company.

In order to run a firm efficiently, the shorter the cycle time, the less resources are necessary.

When the cash-to-cash cycle is short, firms require only a minimal amount of resources to function. Because the cash conversion period is longer, sales growth is higher as a result, and financial performance improves as a result of the increased sales. As a result, the theory is suitable for the current study because it demonstrates the impact of the duration of a cash conversation cycle on the performance of a business organization. As a result, it will be significant in evaluating the effect of management of cash flow on the profit making ability of commercial banks operating in Kenya

2.2.2 Free Cash Flow Theory

This theory was first brought forward by Huseyin in 1991, and it contends that business managers have an obligation to keep cash on hand in order to maintain control over it when making investment decisions. In order to maximize shareholder value, the company's management must make a concerted effort to ensure that it engages in activities that accomplish this goal on a consistent basis.

The capacity to engage in expansion projects while maintaining a considerable amount of cash on hand provides managers with greater confidence in their ability to achieve superior financial success. In other words, management will have no option except to refrain from making any investments that will benefit shareholders. Eljelly (2004), on the other hand, believes that managers might easily make poor decisions if they have a large amount of cash on hand, which is one of the complaints levelled against this idea.

This theory informs the current study because it emphasizes the concept that keeping cash on hand provides the management of commercial banks with valuable time to make informed

investment decisions that will maximize shareholder value. As a result, the theory will aid in determining the influence of management of cash flow on the profit making ability of Kenyan commercial banks. Additionally, the theory is important to this study for it argues for the minimization of conflicting interest among management and stakeholders in order to provide competent and effective management of cash flow models that maximize wealth and resources. The theory also provides support for the shareholder's return by detailing how cash flow ought to be controlled in order to safeguard the value of investments.

2.2.3 Baumol Model

This cash management model, which was hypothesised by Baumol in 1952 and introduced in 1953, predicts the ideal cash balances of business organizations in advance. The Baumol model is predicated on the premise that the variables are known to be true at the time of construction. This method is premised on the notion that determining how much inventory to order is analogous to determining how much cash to keep on hand in a business. The Baumol model makes the assumption of an opportunity cost as well as a transactional cost. Transaction expenses are incurred when a corporation is cash-strapped and has no choice but to sell short-term marketable securities to meet its liquidity needs. According to this understanding, the securities in question have been converted into non-earning securities.

The Baumol model presumes that all of the financial requirements of the company are well-known and consistent. Because it reinforces the premise that commercial organizations have a continuous cash stream and that the opportunity cost of short-term marketable securities is predictable and constant, this theory has application in the present. In this way, the model predicts that the optimal cash balance maintained by a commercial bank in Kenya will have a one on one influence on the financial performance of the institution as assessed by profitability ratios.

It is required for a company to uphold an optimal level of cash flow, according to the model, but it is also necessary for them to do so while taking into account holding cost as well as transaction expenses. This theory is applicable to this study because it helps explain how cash deposits and cash withdrawals help maintain ideal cash levels. This helps support cash flow from investing activities, which is the variable used in the study.

.2.2.4 Miller-Orr Model Theory

It has been demonstrated by Miller and Orr (1961) that an organization's ability to set the maximum and return point of a cash balance has an impact on the organization's financial success. This model is based on the assumption that cash flows are unreliable and that the cash between the upper and lower borders is vulnerable to unpredictable fluctuations in most circumstances. A company's cash reserves must be sufficient to fund the acquisition of marketable securities, thereby allowing the cash reserve to return to its optimal level in order to meet the upper bound on its cash reserves.

To avoid this from occurring, the management team must return to the appropriate range of cash holdings at all times. This can be accomplished by the management by selling and turning the securities into actual cash. With no underlying trend in cash holdings over time, the ideal levels of cash balances are determined by the opportunity costs and the extent to which market swings are experienced. These assumptions form the foundation of the Miller-Orr model. This strategy, which is based on financial performance, is used to identify the optimal monetary limits.

The Miller model is essential in this study since it provides support for the key independent variable that was utilized. The variable that is relevant to investing management of cash flow is the variable that is supported by the theory. Commercial banks in the business's immediate vicinity are responsible for maintaining a standard level of cash flows in the organization.

Commercial companies' management will do everything in their ability to keep cash flows within a normal range whenever cash flows fall below the lower limit. However, when cash flows exceed the superior limit organizations' capacity, the management of commercial companies will reduce them to the ideal standard level, as seen in the diagram. As a result, the profit margins of Kenyan banks, which are the dependent variable in this hypothesis, serve as a source of inspiration.

2.3 Determinants of Profitability of Commercial Banks

Husni (2011) says that the profitability of commercial institutions is mostly driven by factors that are under their control. They are the factors that have an impact on the profits and expenses of a bank or financial institution. According to some study, they can be further divided into two groups: financial statement and nonfinancial statements. When preparing financial statements, financial statement factors directly affect a bank's balance sheet. In addition to the size, location, and number of branches of a bank, there are other non-financial statement qualities that might have an impact on a company's capacity to compete.

2.3.1 Management of cash flow

According to Zimmerer, Scarborough, and Wilson (2008) Zimmerer, Scarborough, and Wilson (2008) explain that investment management of cash flow is the management of capital allocated to products over a period of time to enhance an organization's profit potential.. Investing management of cash flow refers to the process through which a company invests a substantial amount of money in other enterprises, for instance the acquisition of shares, securities or bonds in another business firm. In addition, (Wijewaradana & Munasinghe, 2015) discovered a significant and unfavorable correlation between investment cash flow activities and business success. According to Nwanyanwu (2015), investment in cash flow has a substantial and progressive impact on profit making ability, however

management of cash flow is inversely related to financial performance, according to the few studies that have looked into it (Moeinaddin et al., 2013; Nwakaego, et al., 2015).

2.3.2 Management of cash flow for Operating activities

Operating management of cash flow, is the controlling of cash flows related with a company's operations and transactions (Ghodrati and Abyak, 2014). These cash flows are important because they illustrate the amount of money earned by a company throughout the course of its activities. Amah, et al., (2016) found the evidence of a substantial and optimistic link between operating cash flow and financial success. In the opinion of Habib (2011), cash from operations is favorably connected with stock return, although profit making ability is a short-term statistic that should be avoided. The positive impact of operating cash flow on financial progress has been demonstrated in numerous studies (Al-Debi'e, 2011; Jintaviwatwong & Suntraruk, 2012; Darabi, et al, 2012), and it is imperative to comprehend why the nature of association.

2.3.3 Management of cash flow for financing activities

The amount to which operational and investment operations have been supported externally through the issuance of shares or equity, as well as the issuance of loans or debt, is determined by financing management of cash flow. In addition to borrowing money from investors on the condition that they receive a return in the form of dividends to augment their savings, this also comprises borrowing money from creditors and making payments on loans (Joshua & Vera, 2013).

According to Nwanyanwu (2015), the outflows and inflows of funds associated with raising funds from external sources to fund the operations of a company are called funding cash flows. Ultimately, Mirfakhraldini, Moeinaldin, and Ebrahimpour (2009) concluded that financials have a significant and positive impact on performance. However, Chikashi (2013) found a significant but negative association between funding cash flow and organizational success. Few studies examining funding cash flows found a negative association between funding cash flows and financial progress and success (Poorzamani & Khademi, 2014; Thanh & Nguyen 2013).

2.3.4 Free Management of cash flow

The practice of managing cash generated by a company's operations so that it can be used to repay financial obligations to those who provided capital to the company is called free management of cash flow (Zhou, et al., 2012). This group includes company shareholders and borrowers. This is the money available to managers before the flexible capital venture is completed, known as 'free cash flow'. A company's cash flow is the amount of money it makes after deducting the costs of maintaining or growing its asset base from its earnings.

Akumu & Nyamute (2014) used data from the Nairobi Stock Exchange to examine how free cash flow affects the profitability of firms listed on the Nairobi Stock Exchange. A sample size of his 41 tissues from 62 his NSE companies was set up for secondary data collection using descriptive research methods. Collected data comes from audited tax accounts from 2009 to 2013. Data were analyzed using regression analysis. The data show that there is a non-significant inverse correlation between free cash flow and profitability for companies listed on the NSE.

Free cash flow has a direct impact on a firm's cash position and management has the ability to control earnings and cash flow, so liquidity is a determinant of dividend payments (Chalak & Mohammadnezhad, 2012). . According to Wambua (2020), free cash flow, taking into account all other variables, is an essential factor in predicting taxable earnings, and has a gradual impact on return on assets and return on equity (financial performance). give It is recognized that free cash flow impacts return on assets and return on equity. To test this hypothesis, most studies calculated net free cash flow as part of total assets and found a positive association between free management of cash flow and finances, progress, and success. (Cheng, Cullina & Zhang, 2014; Saez & Gutierrez, 2015; Tijani and Sani, 2016)

2.4 Empirical Literature Review

In investigating management of cash flow approaches, Alslehat and AI-Nimer (2019) investigated how Jordan's 23 insurance enterprises that were in existence between 2014 and 2018 fared financially as a result of their usage of management of cash flow strategies. Investment, operation, and finance were all considered independent components, with financing serving as the dependent variable (financial performance). Compared to other operations, operating cash flows were judged to be the most essential, indicating that Jordanian insurance companies were not experiencing a liquidity problem. Invested funds were also established with the goal of contributing significantly to the financial success of the organization.

Wijewaradana and Munasinghe (2015) also carried out a research in Sri Lanka on the management of investment cash flows as well as the progress of businesses listed on the Colombo Securities Exchange. Specific considerations were made concerning the consequence of optimal management of cash flows on business financial performance within

the conditions of the firm's financial stability, and profitability. This study demonstrated the savings as well as the end results of this study. It also looked into the influence of cash flows on the liquidity and profit making ability of the company. The study acquired the data from the audited fiscal statements of the 37 businesses in the Colombo Stock Exchange, which were selected as a representative sample from the 19 industries that were in operational in 2011. The researchers carried out an ANOVA testing using the variables under study. Cash flow activities such as investment and financing had a considerable although unfavourable connection with commercial performance pointers such as return on equity and return on assets.

A study on the outcomes of a cash management approach on the financial performance of small and medium enterprises (SMEs) in the Northern Region of Ghana was conducted by Hamza, K., Mutala, and Antwi (2018). Quantitative data for this study were collected by administering questionnaires in a descriptive cross-sectional survey approach. The target audience for this study included small business entrepreneurs and managers. A sample of 300 His SMEs was selected using structural random selection. The sample consists of 164 trading companies, 26 manufacturing companies, 10 hairdressing companies, and 62 tailoring companies. Descriptive statistics were used along with inferential statistics when analyzing the information. The study found that management of cash flow had a positive impact on financial results.

Eton and colleagues (2019) explored the association between cash management and business success in the Lira district of Uganda. The information for this cross-sectional inquiry was collected through structured questionnaires. All of the business owners who participated in the poll were confidence in their ability to manage cash receivables, maintain inventory, and earn enough cash to meet their immediate financial needs. The investigation determined that

the aforementioned methods could not be continued over the long run because of the inability to anticipate receipts and payments. Consequently, it was determined that cash management has an impact on financial results. In accordance with the findings of the report, the Ministry of Trade and Commerce and business organizations such as the Uganda Chamber of Commerce should consider providing entrepreneurs with training in cash management to assist them in acquiring the necessary business skills to succeed in their businesses. Apart from that, business owners should consider hiring business specialists that are trained to analyze and predict the success of their companies using a number of statistical models.

According to Nwakaego, Ikechukwu, and Ifunanya (2015), a survey of six publicly traded food and beverage firms in Nigerian Stock Exchange was done to investigate how investing cash flow influence fiscal success and performance of Nigerian food and beverage businesses. Operational cash flows, investing undertakings, and financing actions (independent variables), and performance, which was decided by the study's findings, was the dependent variable (which was determined by the study's findings). In this study, the data from the company's audited yearly financial reports was utilized to evaluate the data using the Multiple Regressions technique, which was put into practice. According to the findings of the study, operating and financing cash movements had a progressive and statistically substantial impact on the organization success of the Nigerian food and beverage industries. The researchers also discovered that investing cash movement or flow had an inverse impact on corporate success and progress.

Ahmed et al. (2018) examined the impact of cash management on the progress of commercial banks in Somalia. This study investigated cash management in a commercial bank in Mogadishu, Somalia, and examined the impact of capital adequacy, accounts receivable, liquidity, and payables management on cash management. A descriptive study was conducted

to complete this study. As a result, the data in the survey were compiled using the survey method. A zero-probability sampling approach was adopted. This involved using directed sampling or scored sampling, resulting in zero-probability samples. Quantitative data were compiled using questionnaires administered to participants. Results were presented in the form of frequency and percentage distributions using the Social Science Statistics Package (SPSS) version 20 program. A total of 48 questionnaires were completed, of which 42 were returned and 6 were returned but not returned, resulting in an 88% response rate and a 12% error rate. Findings show that factors affecting cash management had a significant impact on the financial performance of commercial banks in Somalia. It was interesting to see how the relative importance of each driver's input changed from one bank to the next.

Kemboi (2019) investigated investment cash flows influence the listed firms on the Nigerian Stock Exchange (NSE) that had been in operation between 2012 and 2018. A descriptive survey of publicly traded companies on the capital market, as well as firm-level panel data, were employed in this study. During the studies, it was established that cash flow and debt were independent variables in the investing equations that were used. The results of the study show that there is a significant relationship between investment amount and performance.

Ndungu and Oluoch (2019) also did a descriptive research approach when assessing the outcome of managing cash flow financing on the progress of the businesses in stock market. The researchers acquired secondary semi-annual data from five NSE-listed construction businesses from 2015 to 2018 for their study. In order to analyze the data, the researchers employed a CAPM model. cash flow of operating had a favorable impact on market success and performance, whereas investment cash flow, financing, and free cash flow all impacted it negatively.

Mong'o (2020) also surveyed the impact of cash flow on the conduct of financial institutions during a five-year period beginning in 2015 and ending in 2019. They discovered that net income after taxes (the dependent variable) was the explanatory variable while that the cash flow indicators (financing, operating and investing) were the predicting factors. A regression analysis evaluated the secondary data that had been gathered. Following the completion of the study, it was discovered that earnings at commercial banks climbed considerably during the course of the investigation period. Although the cash movements from investing and financing had a progressive sway on the profit making ability of the banks, the cash movements and flows from operating had negatively impacted the banks profit.

Wambua (2020) investigated the impact of agency fees on the financial performance of companies listed on the National Stock Exchange (NSE). The research looked into the impact of, executive salary, board independence, board size, free cash flows, and CEO dualism on fiscal success and found that they all had a negative impact. The study gathered responses from employees of publicly traded firms and reviewed publicly available data on the present performance of those organizations, as well as the consequences of agency expenses on that performance. In order to examine the data set, means, standard deviations, frequency distributions, and percentages were all computed. In a research of the company's CEO duality, executive salaries and remuneration, board size, board independence and free cash flow, free cash flow was a major indicator of financial performance at a 95 percent confidence level.

2.5 Summary of Literature Review and Research Gaps

A literature review begins by identifying the theory underlying the current research. Examples of financial theories include cash conversion theory, bowmol model approach, mirror-or model, and free cash flow theory. In accordance with the Cash Conversion Cycle

Theory, financial performance increases with a longer cash conversion cycle, and a longer cycle of cash conversion is crucial to the operation of any firm since it helps enterprises to calculate how much money they require.

The Free Cash Flow Theory, contends that business managers must keep cash on hand in order to maintain control over it when making investment decisions, whereas the Baumol Model Approach contends that the ideal cash balances of business organizations are predetermined by the Baumol cash management model, which is predicated on the assumption that the variables predicating cash balances are known to be true. According to the Miller-Orr Model Theory, a corporation's ability to determine the maximum and return point of balance on cash has an effect on the financial progress of the company. This model is based on the assumption that cashflows are unreliable and that the cash between the upper and lower borders is prone to unpredictable fluctuations in most circumstances.

The Recent empirical literature, both locally and globally, shows a wide range of perspectives on how management of cash flow affects the performance of financial and non-financial companies around the world. The differing points of view lead to inconsistencies in the conclusions drawn about the link between management of cash flow and financial success of enterprises. This is due to the fact that the empirical studies under consideration used a variety of different methodological approaches in order to draw conclusions on how management of cash flow affects the financial performance of different firms. As a result, the generalizability of their research findings for the current study, which focuses on commercial banks, is limited. Apart from that, the studies evaluated were conducted in a variety of geographical settings, both domestically and abroad, resulting in contextual gaps, given that the majority of them were not conducted in the context of Kenyan banks. The current study,

which examines the influence of budgeting methods on the financial performance of county governments in Kenya, fills in some of the gaps left by previous research.

2.6: Conceptual Framework

According to McGrath (2009), a conceptual framework is a collection of concepts, most specifically and systematically built to provide focus, reason, and tools for understanding data. Jabareen (2008) also describes a theoretical model as a series of connections between interrelated concepts. As defined by Smyth (2004), a conceptual design is a hypothetical model that identifies the connections that exist between the theory under study and the dependent and predictor variables.

This study uses operating, investing, funding, and free management of cash flow to measure the predictor variables and the dependent variable commercial bank profitability to measure the dependent variable. Based on the framework, it can be shown that management of cash flow variables have a direct impact on the profitability of Kenyan commercial banks licensed to do business.

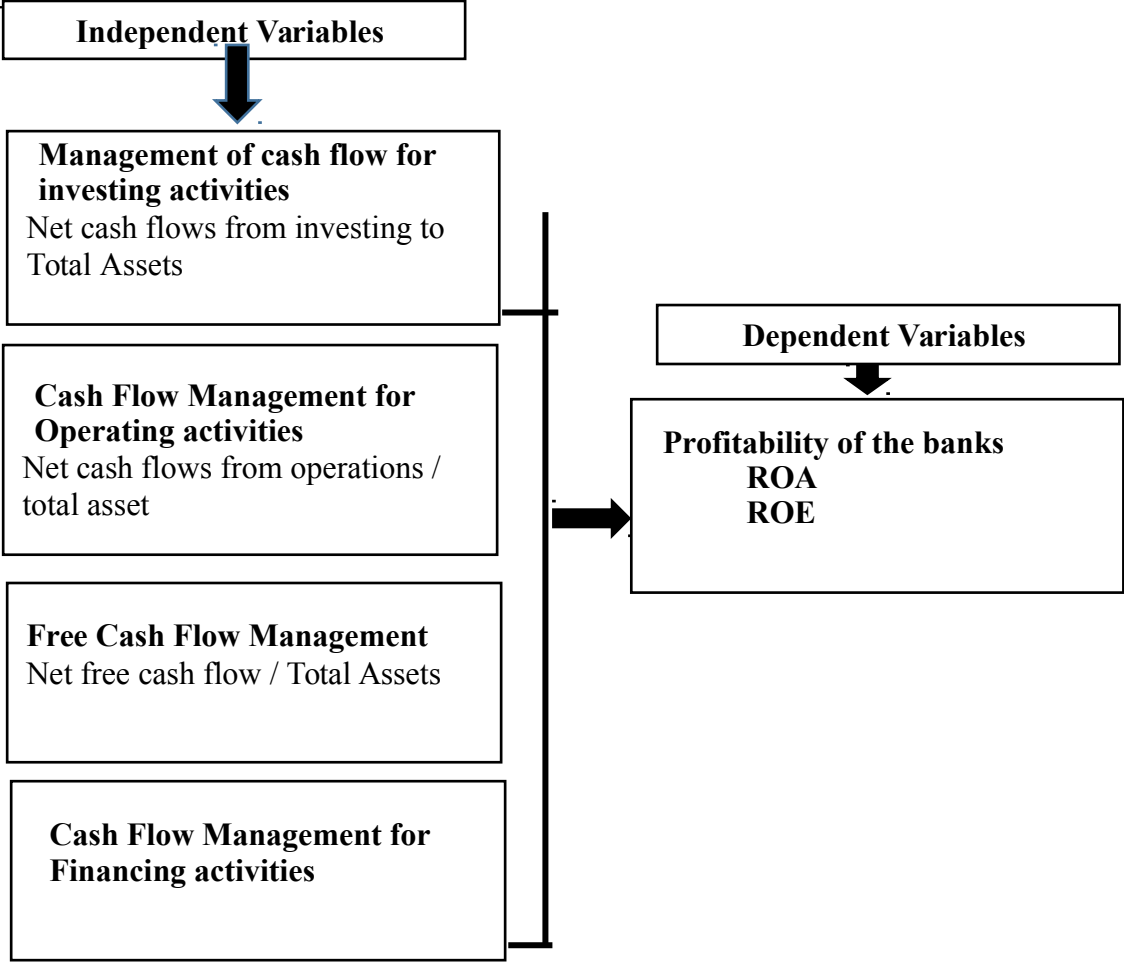


Figure 2.1, Conceptual Model

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research strategy used to compile the data for this study. Therefore, examples of the research methods and layouts used are provided. Study designs and methods aid in data gathering and proper analysis, as explained by Saunders et al. (2019). Therefore, this section elaborates on the study's methodology, demographic, sample sizes, statistical methods, and results. Variable and model measurement are also highlighted in this chapter.

3.2 Research Design

Using a descriptive design, this study examines the impact of management of cash flow on the profit development of a Kenyan commercial finance company. The choice of descriptive design for this survey is based on the premise that it helps gather information as it arises, and also helps provide both quantitative and qualitative information at a given point in time. . Furthermore, this design is suitable for our study as it allows for the summary, interpretation and presentation of the collected data in tables, charts and graphs.

3.3 Target Population

The target study population consisted of the 40 commercial banks registered to undertake banking functions in Kenya (see Appendix I). Therefore, given the small number of the commercial banks in Kenya, the study will use census sampling approach to involve the all the 40 commercial banks

3.4 Data Collection

Mugenda (2009) explains that scientific investigation requires the development of

instruments that produce precise and expressive data in order to arrive at a decisive conclusion. Secondary data was gathered from the respective bank headquarters by using the data collection template (see Appendix II). The information gleaned and examined from these reports assisted the investigator in conducting noteworthy analysis on pertinent independent predictors (investing management of cash flow, operating management of cash flow, financing management of cash flow, and free management of cash flow) and dependent variables (profitability).

3.5 Diagnostic Tests of Secondary Data

3.5.1 Multicollinearity

In order to determine the existence of multi-collinearity, the present research used correlation coefficients in conjunction with factors responsible for the inflation of the variance. According to Kothari (2004), multicollinearity occurs when independent variables have a strong relationship with one another, which messes with the coefficients and makes it hard to understand and comprehend the results of the research, which in turn invalidates the significance of the tests. Conversely, VIF shows how much standard errors rise due to multicollinearity. The coefficients are then tested to see whether they are more than or equal to 0.8, and in the case of VIF, the value is required to be at least 5. This finding is corroborated by the findings of Gujarati (2003), who states that multicollinearity becomes apparent when the coefficients of the independent variables surpass the 0.8 threshold or the VIF records more than 5 as the reference point.

3.5.2 Test Normality

The research conducted a test to see whether the independent variables and their associated regression coefficients exhibited nonskewness, indicating that the data set was normally distributed. A normal distribution should not be abnormally flat (platykurtic) or steep

(hypergeometric) (leptokurtic). In addition, the data should not be favorably or negatively skewed, since this might cause interference in efficiency and statistical analyses and make the data useless (Green, 2008). If the numbers are highly skewed or kurtosis-inflated, it suggests that something is up with the distribution of the data. In a similar vein, Kerlinger (2011) explains that if the skewness value exceeds 3 and the kurtosis value exceeds 10, the data may be considered abnormal.

3.6 Significance Test

T-test analysis was used to compare observed data with a hypothetical population's average. It's the mean with the least variation, measured in terms of the standard deviation. The t-statistic was utilized in the current research for the regression analysis with a threshold of significance of 5%.

3.6.1 F-tests

Any statistical endeavor will make use of the F-test to display the way in which the data are distributed (F-distribution) in accordance with meaningless assumptions. To choose the model that best matches the research population, it is often used to correlate statistical designs that fit extremely well in the data set. The F value was calculated at the 95% confidence level to determine whether all predictive variables (investment management of cash flow, financing management of cash flow, operating management of cash flow, and free management of cash flow) matched extremely well with the profitability of commercial banks in the current research.

3.7 Data Analysis

In order to evaluate the data, the researchers employed SPSS version 26. Data analysis methods included mean, frequency, and percentage calculations, as well as multiple linear regression. This assisted in determining the precise relationship between management of cash

flow and banks' bottom lines.

3.7.1 Empirical model

Therefore, the overall econometric model was:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

In which;

Y = profit performance of commercial banks

X₁ = investing management of cash flow

X₂ = financing management of cash flow

X₃ = operating management of cash flow

X₄ = free management of cash flow

e = Error of prediction

β_0 = Constant Keeping all other factors at 0 creates a value for the dependent variable, which in this case is the commercial banks' profit margin. Independent variable regression coefficients 1, 2, 3, and 4 = indicate the rate of change in the dependent variable for each unit change in the independent predictor;

Table 3.1 Operationalization of the Variables

Type	Variables	Symbol	Description and calculation
Dependent variable	profitability	Y	ROA = $\frac{\text{Net profit}}{\text{Total assets}}$
		ROE	ROE = $\frac{\text{Net profit}}{\text{Total Equity}}$
Independent Variables	Investing cash flow of management	X ₁	ICF = $\frac{\text{Net Cashflow from investing}}{\text{Total assets}}$
	Operating cash flow of management	X ₂	OCF = $\frac{\text{Net Cashflow from operations}}{\text{Total assets}}$
	Free cash flow	X ₃	FCF = $\frac{(\text{EBIT} + \text{Dividends}) - \text{Depreciations}}{\text{Total assets}}$

Financing cash flow management	X_4	\rightarrow	FICF	=	$\frac{\text{Net Cashflow from financing}}{\text{Total assets}}$
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3.7.2 Significance Test

The t-test is a statistical test used to compare two means, in this case, the observed value and the population mean. It's the average from which all other means are calculated relative to the standard deviation. The t-statistic was utilized for regression analysis at a 5% level of significance in the current investigation.

CHAPTER FOUR RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

Following the methods described in Chapter 3, this section summarizes the study's results and discusses them in light of the study's stated goals. All of the data gathered has been thoroughly reviewed, edited, and formatted for analysis and display. To ensure the approaches were used properly, diagnostic and descriptive tests were carried out. A commercial bank in Kenya used multiple regression analysis to reveal a complex relationship between cash flow management and financial performance.

4.2 Diagnostic Tests Results

The information variables are put through these tests to ensure they are in line with the requirements and assumptions of the multiple regression analysis methods used, making for more reliable and accurate findings. Some assumptions are needed for the fixed and random effects model to work, and one of them is that the parameters are linear. As with the second, the error terms are assumed to have a mean value of zero. The lack of multicollinearity is assumed in the fifth hypothesis. Sixth, normality in the distribution of the error terms is assumed on occasion, as shown by the assumption of a constant variance (2) and a zero mean (Hill, Griffiths, & Lim, 2011).

4.2.1 Multicollinearity Test Results

When many of the independent variables used in a regression analysis are also correlated, a phenomenon known as multicollinearity arises. Since independent variables shouldn't have any kind of effect on one another, this link can be cause for concern. Multicollinearity was analyzed for the current research using the variance inflation factor and tolerance limits. Whenever Tolerance is more than 1, the VIF is $1/\text{Tolerance}$.

Table 4.2 *Tolerance and Variance Inflation Factor*

Variables	Tolerance	VIF
INCF	0.754	1.444
FICF	0.776	1.369
OCF	0.763	1.468
FRFC	0.782	1.392
Mean VIF	0.769	1.418

Key:

INCF= Investing Management of cash flow

FICF=Financing Management of cash flow

OCF=Operating Management of cash flow

FRFC=Free management of cash flow

Tolerance values ranged from 0.75 to 0.78, as seen in Table 4.1. 1.444, 1.369, 1.468, and 1.392 were the corresponding VIF values. The average values for tolerance were 0.769 and VIF was 1.418. The average VIF score was 1.418, therefore it is between 1 and 5. Likewise, all VIF values for the separate objective variables fell within this range, indicating the absence of multicollinearity. Values of VIF that surpass 10 are often interpreted as indicative of multicollinearity; however, in weaker models, values of VIF that exceed 2.5 are also reason for worry due to the increased likelihood of erratic results (Runkle et al., 2013)

4.2.2 Normality Test Results

For the aim of time series analysis, it is recommended to use inferential statistics to ascertain whether or not the actual variables themselves exhibit any underlying association. To ensure that the regression residuals followed a normal distribution, we tested the variables for normality. In addition, Skewness and Kurtosis tests were performed on all of the acquired secondary data, and the results are shown in Table 4.2. The purpose of this test was to see whether the data utilized in the analysis followed a normal distribution.

Table 4.3 *Normality Test*

N	Skewness	Kurtosis
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	Statistic	Statistic	Std. Error	Statistic	Std. Error
ROE	40	2.247	.142	1.106	.236
ROA	40	1.968	.142	1.236	.236
Investing Management of cash flow (INCF)	40	1.282	.142	1.610	.236
Financing Management of cash flow (FICF)	40	1.035	.142	1.178	.236
Operating Management of cash flow (OCF)	40	1.281	.142	1.122	.236
Free management of cash flow (FRFC)	40	1.456	.142	1.136	.236
Mean	40	1.545	.142	1.231	.236

Source: Research Findings (2022)

As shown in Table 4.2, the average skewness is 1.545 and the average kurtosis is 1.231.

According to Kothari (2004), data are normally distributed if the skewness and kurtosis values are between +2 and -2. This means that the data used in this study were normally distributed, as both the average skewness and kurtosis values in this study are below the normality criterion. Both Tabachnick and Fidell (2007) and Hair et al. argues that skewness values should not exceed 2 and kurtosis values should not exceed 7 for data that can be considered normal. gain. (2007).

4.3 Descriptive Statistics

In this study, the mean, median, mode, variance, skewness, kurtosis, and Jarque B values of the independent variables over time were calculated and tabulated for easy reference and analysis.. In order to prevent serious problems, the data utilized in the research were cleaned up and reorganized.

4.3.1 Profitability of the Commercial Banks

The study sought to assess the profitability of the commercial banks in Kenya using ROA and ROE as measurements of profitability. Table 4.3 shows the results.

Table 4.4 Profitability of the Commercial Banks

Variables	Mean	Max	Min	Standard Deviation	Kurtosis	Skewness	Jarque	Sig.
ROA	0.163	0.962	-0.033	0.159	2.364	0.412	9.145	0.004
ROE	0.024	0.884	0.014	0.212	2.639	0.213	6.592	0.002

N= 40

The study established that on average, the mean ROA for the commercial banks observed was 0.163, while that of ROE was 0.024. The maximum ROA for the banks were found to be 0.962, while the maximum ROE was 0.884. The minimum for both ROA and ROE was -0.033 and 0.014 respectively. In contrast, all commercial banks showed positive skewness of 0.412 for ROA and 0.213 for ROE, indicating that the vast majority of the data were clustered in the expected area. Having a kurtosis value of 2.639 for ROE and 2.364 for ROA indicated a fairly thick tail of the distribution. The Jarque-Bera test values for both ROA and ROE were less than 0.05, indicating that the data were generally normally distributed:

9.145 and 0.004 (p0.004) and 6.592 and 0.002 (p0.002) (Gujarat, 2008).

4.3.2 Descriptive Statistical Analysis of Investing Management of cash flow

Investment management of cash flow descriptive data during a five-year period are provided in Table 4.4.

Table 4.5: Results of Descriptive statistics of ICF

	Mean	Min	Max	Standard Deviation	Kurtosis	Skewness	Jarque	Sig.
ICF	0.048	-0.799	0.889	0.211	2.071	-0.222	5.829	0.033

N= 40

In a sample of 40 median observations, the average management cash investment ratio is 4.8%, with minimum and maximum values of -0.799 and 0.889, respectively, and a standard deviation of 0.211. This suggests that commercial banks' cash reserves were derived from

investment activities. Most of the cash flows are reported to be on the left end of the distribution, but all commercial banks report a negative skewness of -0.222. The tails of the distribution are quite thick, as indicated by the kurtosis value of 2.071. Tabachnick and Fidell (2007) and Hair et al. (2007) show that the value of skewness should not exceed 2 and the value of kurtosis should not exceed 7 on the consideration of a normal data The ICF passed the test of Jarque- Bera with a p-value equated to 0.033 indicating that the values are normally distributed. This means that the p-value is 5.829. (Gujarat, 2008).

4.3.3 Descriptive statistical Results for FICF

Descriptive data on management of cash flow in finance over a five-year period are provided in Table 4.5.

Table 4.6: Descriptive statistical Results for FICF

	Mean	Min	Max	Standard Deviation	Kurtosis	Skewness	Jarque.	Sig.
FICF	0.024	-0.577	0.941	0.258	2.405	0.695	12.574	0.049
N=40								

According to Table 4.5, the lowest and highest values for the average financing cash from management rate of 2.4% over 40 observations were -0.577 and 0.941, respectively, with a standard deviation of 0.24. All commercial banks, however, reported a positive skewness of 0.695 for their cash flows, indicating that the majority of their cash flows fell into the distribution's proper tail. The kurtosis coefficients, which measure tail thickness, were within a respectable range (1.7–2.5), coming in at 2.405. Tabachnick and Fidell (2007) and Hair et al. (2007) indicate that values of skewness should not exceed 2 and values of kurtosis should not exceed 7 for data to be considered normal. Since the p-value for the Jarque-Bera test of 12.574 for FICF was 0.049 (less than 0.05), we may infer that the variable follows a nearly normal distribution (Gujarat,

2008).

4.3.4 Descriptive statistical Results for Operating Management of cash flow

Table 4.6 shows descriptive statistics related to controlling operational cash flow.

Table 4.7: *Results of Descriptive statistics of OCF*

	Mean	Min	Max	Std.Dev	Kurtosis	Skewness	Jarque-B	Prob.
OCF	0.682	0.041	0.997	0.272	1.584	0.172	11.677	0.025
N= 40								

Table 4.6 reveals that the average operational cash from management rate for 40 observations was 68.2%, with lowest and highest values of 0.041 and 0.997, correspondingly, and a standard deviation of 0.272. This illustrates that the vast majority of the cash generated by commercial banks came from operational operations. Management of operating cash flow revealed unfavorable results. A skewness value of -0.172 showed that the distribution was positively skewed, with the bulk of the data being on the right tail. The kurtosis coefficient, which gauges the thickness of the distribution's tails, was 1.584, which was deemed moderate and indicated that the distribution was normal. For data to be deemed normal, Tabachnick and Fidell (2007) stated that values of skewness ought not exceed 2 and values of kurtosis ought not exceed 7. The Jarque-Bera test result for OCF was 11.677 with a p-value of 0.025, indicating that the research variable is roughly normally distributed (Gujarat, 2008).

4.3.5 Descriptive statistical Results for Free management of cash flow

Table 4.7 shows some descriptive numbers related to controlling your free cash flow.

Table 4.8: *Results of Descriptive Statistics of FCF*

	Mean	Max	Min	Standard Deviation	Kurtosis	Skewness	Jarque.	Sig.
FCF	0.201	0.943	-0.627	0.335	2.459	0.292	3.488	0.036

N = 40

Table 4.7 shows that throughout the course of 40 observations, the average rate of free cash from management was 20.1%, with the lowest and highest values of -0.627 and 0.943, and a standard deviation of 0.3350. With a skewness of 0.292, the distribution seems to have a positive expansion of the asymmetric tail. This suggests that most commercial banks did not make use of their free cash flows above, and hence the distribution is biased to the right. With a kurtosis value of 2.459, which quantifies the fatness of the distribution's tails, this example is considered to have extreme skewness. Hair et al. (2007) state that if the skewness value is more than 2 and the kurtosis value is more than 7, the data cannot be normal. The p-value of 0.036 from a Jarque-Bera test on FCRF's distribution indicates that it follows a normal distribution.

4.4 Results of Regression Analysis

A multiple regression approach was utilized to establish the nature of relationship between management of cash flow and profitability of banks in Kenya.

Table 4.9. *Model Summary*

Model	R	R Square	Adjusted R Square	Std. An error of the Estimate
1	0.844 ^a	0.712	0.694	0.254

a. Predictors: (Constant), management of cash flow (investing management of cash flow, financing management of cash flow, operating management of cash flow and free management of cash flow)

R squared sometimes called the coefficient of determination, illustrates the relationship between management of cash flow and commercial bank profitability. As seen in the model summary table, the R2 value was 0.712. According to the results, management of cash flow is

responsible for explaining or accounting for up to 71.2% of the variation in the profitability of commercial banks in Kenya. Furthermore, this means that commercial banks in Kenya may attribute 71.2% of their profitability to proper management of cash flow with a 95% degree of certainty (CL).

Table 4.10 ANOVA Output

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.293	4	3.574	5.69	0.001 ^a
	Residual	22.613	36	0.628		
	Total	36.906	40			

a. Predictors: (Constant), investing management of cash flow, financing management of cash flow, operating management of cash flow and free management of cash flow

b. Dependent Variable: profitability of commercial banks in Kenya

The significance of using a regression model was investigated using ANOVA, and an f-significance value of 5.69 was discovered at p0.05 (p=0.001). This means there is a likelihood of less than 5% that the regression model we are using to make our forecast will be incorrect. Since a result, we may infer with a high degree of confidence that the results obtained using this regression model are stable and reliable, as the level of confidence is more than 95%. Beta coefficients and statistical significance were calculated, and the results are given in Table 4.10.

Table 4.11 Coefficients Output

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	14.326	0.186		77.02	0.0435
Investing Management of cash flow	0.577	0.068	0.559	8.485	0.010
Financing Management of cash flow	-0.457	0.054	0.339	-6.519	0.023
Operating Management of cash flow	0.352	0.043	0.357	10.628	0.010
Free Management of cash flow	0.614	0.047	0.442	13.064	0.020

a. Dependent Variable: Profitability of commercial banks in Kenya

According to table 4.10's coefficient values, there is a significant positive relationship between management of cash flow and commercial bank profitability in Kenya -.

This led to the following regression equation:

$$Y = 14.326 + 0.577X_1 - 0.457X_2 + 0.352X_3 + 0.614X_4$$

Commercial banks in Kenya were shown to benefit from careful management of investment cash flow (=0.577; p.05), financing cash flow (=0.457; p.05), operating cash flow (=0.352; p.05), and free cash flow (=0.614, p.05), as shown in Table 4.10. Therefore, the management of cash flow techniques discussed in this research significantly boosted the bottom lines of Kenya's commercial banks. This suggests that the profitability of Kenyan commercial banks is affected by a shift of 0.577 units for every one unit in investment management of cash flow

4.5 Discussion of the Findings

The analysis of the descriptive statistics of cash flow investment management for 40 representative observations produced a mean rate of 4.8% , lowest and highest values of -0.799 and 0.889, and a standard deviation of 0.211. Cash on hand at commercial banks was a direct effect of investment. Thus, the firm's investment strategies and spending have paid off, as shown by the positive net income from investing operations. Since return on assets (ROA) is established by division of net income by firm's total assets, and since investment in equipment, property, and assets affects profitability, increasing such investments is crucial for increasing ROA (ROE and ROA). 40 data were used to calculate an average rate of 2.4 percent, with a standard deviation of 0.24% (range: -0.577 to 0.941). Comparing the descriptive results for operating management of cash flow, we discover that the average rate is 68.2%, with a range of 0.041 to 0.997 and a standard deviation of 0.272, based on 40 observations. It's clear that commercial banks generated most of their cash flow from normal business operations. After collecting 40 data points, we discover that the average free cash flow rate is 20.1%, with least and highest values being -0.627 and 0.943, respectively, and a standard deviation of 0.3350. The ability to make profit among the Kenya's commercial financial institutions is significantly affected by four factors: investment cash flow

management, financing cash flow management, management of operational cash flow, and management of free cash flow ($=.577$; $p<0.05$). Since commercial banks in Kenya benefited significantly from the techniques examined here, it can be concluded that management of cash flow is an important factor in the country's economic growth. This indicates that for every unit change in the management of investment cash flow, the profitability of Kenyan commercial banks will change by 0.577 percentage points. This study's findings that investment cash flow position is positively related to profits are consistent with those of Nwanyanwu (2015). Similar findings were found by Kemboi (2010) and Jafari, Gord, and Beerhouse (2014). Investments arising from cash flow was shown to have a favorable and statistically significant influence on its performance financially. While Nwakaego, Ikechukwu, and Ifunanya (2015) found a negative correlation between investment cash flow and business performance, our findings show the opposite. Moeinaddin et al. (2013) and Wijewardana and Munasinghe (2005) found a strong inverse correlation between performance on financing cash flow activities and investment(2015). The research also revealed that for every unit change in financing management of cash flow, the profitability of Kenyan commercial banks would decline by 0.457 percentage points.

Commercial banks in Kenya should expect a profit shift of 0.352 percentage points for every unit change in operational management of cash flow. According to Ghodrati & Abyak, "strong financial management is correlated with operational cash flow" (2014). We found a positive and statistically significant correlation between operational cash flow and sound management of finance. In 2016, Amah, Michael, and Ihendinahu identified a robust positive relationship between performance and cash flow from operational operations. Profits are fleeting, but Habib (2011)'s study shows a high correlation between operational cash flow and stock performance. According to Jintaviwatwong and Suntraruk (2012), the value of a company's stock now, tomorrow, and in the future is all positively correlated with one

another. Moreover, the research demonstrated that for every unit change in Free Management of cash flow, the profitability of Kenyan commercial banks shifted by 0.614 percentage points. The results of this research are corroborated by those of Wambua (2013), who discovered that cash flow which is free has beneficial impacts on performance financially. The findings of research by Cheng, Cullina, and Zhang (2014) and Tijjani and Sani (2016), on the other hand, demonstrated that free cash flow and profits per share positively influenced dividend policy.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a concise overview of the study's findings, its conclusions, and its recommendations for future policy. In addition, given the scope of this investigation's limitations, we provide a suggestion for further study. The overarching purpose of the research was to determine whether or not commercial banks in Kenya might raise their profitability via better management of their cash flows.

5.2 Summary of the Study

The study was designed to quantify how improved management of cash flow impact on financial performance of Kenya's commercial banks. Therefore, the study aimed to determine how various aspects of cash flow management affect the profitability (ROA and ROE) for Kenyan commercial banks. Management of cash flows into and out of investments, finance, operations, and free cash flow were all covered. Fifty (50) Kenyan commercial banks were selected at random to take part in the research. Given the small sample size, the study covered all 40 commercial banks in Kenya and used a census-based research strategy. The research utilised secondary data obtained from these commercial banks' audited yearly financial reports and other publications for 2017-2021.

Both the multicollinearity test and the normality test were used in this investigation. Management of cash flow and the profitability of Kenya's commercial banks were descriptively analyzed and the association between the variables assessed through multiple regression modeling. Metrics like ROA and ROE were used to measure the profitability of the firms and how these indicators are influenced by cash flow management. The impact of

investments in management of cash flow on the bottom lines of commercial banks in Kenya is examined. The ratio of investment net cash flow to total assets was one metric used in this cash management evaluation. Management of investment cash flow was shown to have a statistically significant effect on the returns on equity and on assets of Kenyan commercial banks ($=.577$; $p0.05$).

The effect of cash management on Kenya's commercial banks' bottom lines. A company's ability to manage its financing cash flows was measured by comparing its net financing cash flows to its total assets. The findings reveal that financing management of cash flow has a statistically substantial negative effect on the return on equity (ROE) and return on assets (ROA) of commercial banks in Kenya ($=-.457$; $p.05$). This research examined the impact of operational management of cash flow on the profitability of commercial banks in Kenya by determining the ratio of a company's net cash flows from firm's operations to its total assets. The results showed that the profitability (ROE and ROA) of Kenyan commercial banks was strongly influenced by operational management of cash flow ($=0.352$, $p0.05$). Researchers estimated the ratio of profits prior to interest, dividends taxes, and depreciation to total assets to determine the impact of free income management on the bottom lines of Kenya's commercial banks. Profitability (ROE and ROA) at commercial banks was shown to be significantly correlated with free management of cash flow at the 5% level of significance ($=.614$, $p.05$).

5.3 Conclusions

Management of cash flow has a optimistic and sizable consequences on the return on equity and return on assets of Kenya's commercial banks, according to the study's findings. The study also found that commercial banks' profitability (ROE and ROA) is negatively impacted by financing management of cash flow since it raises the cost of operations and management, which, if raised too high, might force the banks to liquidate their assets rather than pay their

debts.

The research shows that operational management of cash flow has a significant and positive impact on the profitability (ROE and ROA) of Kenyan commercial banks. As substantiated by the study's results, operational management of cash flow favorably affects the profitability (ROE and ROA) of Kenyan commercial banks. The broad inference is that operational management of cash flow performed the best relative to the other operations, indicating that when commercial banks' revenues increase from their core business they do not experience a liquidity crisis. The study also concludes that free management of cash flow positively and strongly associate with the profitability (ROE and ROA) of Kenyan commercial banks, indicating that commercial firm's management of cash flow reduces the possibility of corporate failure but promote optimal management of free income.

5.4 Recommendations

The association between investment management of cash flow and profitability (ROA and ROE) of commercial banks is favourable; thus, the management of commercial banks should raise the amount of investment to maximize the investment return. Regulatory agencies such as NSE, CMA, and CBK should advise commercial banks to implement a result-oriented income system that encourages investors or shareholders to accept any financial risk that may damage their investment.

It was shown that the profitability (ROA and ROE) of commercial banks is inversely proportional to their capacity to control their financing cash flow. Commercial bank management may improve the firm's value and reduce over-financing by using spreading programs and adjusting the funding policy and implementing an efficient financing plan to boost company performance.

It seems to reason that commercial banks should have enough reserves of operational cash for the smooth running of their operations, given that the management of cash flow operation has an effective effect on profitability (ROA and ROE). It was shown that free management of cash flow positively affects commercial banks' profitability (ROA and ROE), indicating that bank managers should seek to increase the quantity by investing in the free cash flow and financial performance, hence increasing dividends.

5.5 Limitations of the Study

Due to the potentially sensitive nature of the data being gathered, especially that which referred to the company's finances, a number of respondents were unwilling to submit the information essential for this study.

However, the researcher addressed this challenge by explaining to the respondents the intention of the study and assuring them of their confidentiality of information and withholding of identity in line with ethical behaviors.

The findings of the study was solely based on commercial banks registered in Kenya and not any other business organization. This therefore implies that the findings of this study would not be generalized for other business organizations. Besides, the conclusions of the findings were linked with the profitability of commercial banks which were only measured in terms of ROA and ROE, and so, the findings cannot be generalized for other indicators of profitability such as ROI.

The study findings only relied on secondary data of which there may be biasness in data during collection or entering of data especially the financial records of the commercial banks, which the researcher may not have control over but may inadvertently affect the outcome of the study.

5.6 Areas for Further Research

This research focused only on Kenyan Commercial Banks. Therefore, more study should be undertaken using the same methods to collect data from organizations in various industries. In addition, the sample of information will be segregated and examined by industry. In this manner, it is possible to contribute to the development of a more industry-specific theory.

The paper also calls for additional study into the ways in which effective management of cash flow affects other measures of financial performance, such as an institution's Asset quality, Capital sufficiency, Management, Liquidity, and Earnings.

Finally, the study suggests that future researchers base their study on how management of cash flow influences the financial performance of these firms before generalization is made and also to bring out a candid interpretation of the relationship, as firms in the non-financial sector were not included in the current study.

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APPENDICES

Appendix I List of Commercial Banks

1. African Banking Corporation
2. ABC Bank
3. Afrika Investment Bank
4. African Development Bank Group
5. Bank of Baroda (Kenya) Ltd.
6. Bank of Africa Kenya Ltd
7. Chase Bank
8. CFC Stanbic Bank Limited
9. Commercial Bank of Africa
10. Citibank N A
11. Co-operative Bank
12. Consolidated Bank
13. Dubai Bank Kenya Ltd
14. Development Bank Of Kenya Ltd
15. Equatorial Commercial Bank Limited
16. Dyer & Blair Investment Bank
17. Equity Bank
18. Equatorial Investment Bank
19. Fidelity Bank
20. Faida Investment Bank – FIB
21. Giro Commercial Bank Ltd
22. Fina Bank
23. Housing Finance

24. Guardian Bank Ltd.
25. Investments & Mortgages Bank Limited – I&M Bank
26. Imperial Bank Limited
27. Kenya Post Office Savings Bank
28. KCB Bank
29. National Bank
30. K-Rep Bank
31. Oriental Commercial Bank Ltd
32. NIC Bank
33. Prime Bank
34. Paramount Bank
35. Standard Investment Bank
36. Standard Chartered
37. Suntra Investment Bank Ltd
38. Sterling Investment Bank
39. UBA Kenya Bank Ltd
40. The Co-operative Bank

Appendix II: Data Collection Tool

Variables	2016	2017	2018	2019	2020
Investing management of cash flow					
Financing management of cash flow					
Operating management of cash flow					
Free management of cash flow					
Total Assets					
Total Capital					