WORKING CAPITAL MANAGEMENT AND PROFITABILITY OF DAIRY COMPANIES IN KENYA

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DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged

Jackline Chelangat Chumo Signature:  Date: 06/10/2025

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I do hereby confirm that I have examined the master's dissertation of

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And have certified that all revisions that the dissertation panel and examiners recommended have been adequately addressed.

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ABSTRACT

The study examined the effect of working capital management on profitability of dairy companies in Kenya, with firm age as a moderating variable. The focus was on three key components of working capital—accounts receivable management, cash management, and payables management—and how their efficiency influences financial performance in the dairy sector. The study adopted a descriptive and correlational research design, targeting finance, operations, and sales managers from selected dairy companies across Kenya. Data were collected using a structured Likert-scale questionnaire and analyzed through descriptive statistics, correlation analysis, and hierarchical regression techniques using SPSS. Descriptive results revealed that most dairy firms practiced sound working capital management, including regular credit assessments, adherence to cash forecasting, and strategic negotiation of supplier credit terms. Correlation analysis showed positive and significant relationships between all working capital variables and profitability, indicating that efficient management of short-term assets and liabilities enhances firm performance. Regression analysis without the moderator established that the three working capital components collectively explained 68 percent of the variation in profitability ($R^2 = 0.680$, $p < 0.01$), signifying a strong overall model. However, individually, accounts receivable management had a positive but statistically insignificant effect ($R^2 = 0.068$, $p > 0.05$), suggesting that while credit control improves liquidity, it does not independently drive profitability. Cash management had a positive and statistically significant relationship ($R^2 = 0.430$, $p < 0.05$), implying that prudent management of cash inflows and outflows directly enhances profitability through better resource utilization. Payables management showed a positive but insignificant influence ($R^2 = 0.070$, $p > 0.05$), indicating limited impact unless complemented by other financial practices. When firm age was introduced as a moderating variable, the model's explanatory power increased to 78.6 percent ($R^2 = 0.786$), demonstrating that mature firms benefit more from efficient working capital management due to experience, stability, and stronger financial structures. Although the moderating effects of firm age on individual variables were not statistically significant, the overall improvement in model fit suggests that organizational maturity enhances financial discipline and performance. The study concludes that effective working capital management, particularly cash management, is crucial for improving profitability, and firm age strengthens this relationship by reinforcing managerial and operational efficiency within Kenya's dairy industry.

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ACCRONYMS AND ABBREVIATIONS

AR: Average Receivables

CCC: Cash Conversion Cycle

CVI: Content Validity Index

GLS: Generalized Least Squares

KDB: Kenya Dairy Board

ROA: Return on Assets

ROE: Return on Equity

SMEs: Small and Medium Sized Enterprises

WCM: Working Capital Management

OPERATIONAL DEFINITION OF TERMS

Accounts Receivable Management: Refers to the process of managing money owed to the company by customers. It involves setting credit policies, invoicing promptly, and following up on overdue payments to ensure timely cash inflow. (Anton & Afloarei, 2020).

Cash Management: Refers to the planning, monitoring, and control of cash flows within a company to ensure sufficient liquidity for operations while minimizing idle cash. It includes budgeting, forecasting, and investing surplus funds. (Golas, 2020).

Profitability: This is the ability of a company to generate earnings compared to its expenses and other costs over a specific period. It is commonly measured using indicators such as Return on Assets (ROA), Net Profit Margin, and Return on Equity (ROE). (Umar & Al-Faryan, 2024).

Working Capital: Refers to the difference between a company's current assets (such as cash, accounts receivable, and inventories) and current liabilities (such as accounts payable and short-term debts). It represents the liquidity available for day-to-day operations (Popescu et al.,2020).

Liability Financing: Involves sourcing and managing funds to finance a firm’s short-term operational needs. This includes internal financing (retained earnings) and external sources like trade credit, bank overdrafts, and short-term loans (Altaf & Ahmad, 2019).

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

For firms, particularly those operating in productive sectors such as agriculture and manufacturing, financial health and profitability form the backbone of this development. Profitability serves as a key measure of a firm's performance, sustainability, and contribution to the wider economy. It determines a company's ability to generate income relative to its costs, ensuring that value is continuously created for shareholders, employees, and other stakeholders (Setianto, 2022). According to Sherif (2025), maintaining consistent profitability supports expansion, competitiveness, and long-term survival in dynamic markets. However, the ability to sustain profitability depends largely on the efficiency with which internal financial resources—especially working capital—are managed. Effective working capital management ensures that firms can meet short-term obligations, maintain liquidity, and allocate resources to profitable ventures, thereby contributing not only to business growth but also to broader economic stability (Bintara, 2020).

Globally, working capital management (WCM) has been recognized as a crucial component of corporate financial strategy, directly influencing liquidity, profitability, and firm sustainability. The World Bank (2022) notes that efficient working capital management enables firms to withstand market fluctuations, minimize financial risks, and maintain steady cash flows. Studies in both developed and emerging economies consistently demonstrate that firms optimizing their working capital cycles achieve higher profitability and resilience. For instance, Lopez (2022) observed that Turkish dairy companies implementing sound working capital practices experienced improved liquidity, stronger profit margins, and reduced reliance on external borrowing. Adhil

(2023) further found that such firms were better equipped to withstand financial shocks, particularly during global economic disruptions. In addition, Deloof (2003) and Lazaridis and Tryfonidis (2006) established that effective management of inventories, receivables, and payables enhances operational efficiency and shareholder value. These findings underscore that profitability and sustainability across industries depend greatly on prudent working capital management and liquidity control.

In Sub-Saharan Africa, the efficient management of working capital continues to be a major determinant of firm performance due to challenges such as limited access to affordable credit, unstable market conditions, and high production costs. The African Development Bank (2021) reports that many firms across the continent face liquidity constraints caused by delayed payments, inefficient inventory systems, and limited financial planning capacity. Consequently, working capital efficiency has emerged as a key predictor of financial success among manufacturing and agribusiness enterprises. In Nigeria, for instance, Ibrahim, Usaini, and Elijah (2021) found that dairy firms optimizing their cash conversion cycles achieved stronger financial performance by reducing inventory days, expediting receivables collection, and negotiating favorable payment terms. Similarly, Osazefua (2020) emphasized that firms practicing efficient working capital control not only achieved higher profitability but also improved their capacity to manage risks associated with volatile economic environments. In Uganda, Ainebyona and Twinoburyo (2021) observed that dairy firms that improved receivables management and inventory control recorded better cash flow stability and profit margins, while Sunday, Turyahebwa, and Byamukama (2023) found that strong supplier relationship management enhanced resilience to supply chain disruptions. These regional experiences highlight that effective

working capital management contributes significantly to the competitiveness and sustainability of African enterprises.

In Kenya, the dairy industry plays a vital role in agricultural and economic development, contributing about 4 percent to the national GDP and supporting more than 1.8 million smallholder farmers (Kenya Dairy Board, 2023). It remains a critical source of employment, nutrition, and rural livelihoods. However, the sector's profitability is often undermined by inefficiencies in working capital management, including poor cash flow control, delayed payments from distributors, high inventory costs, and limited access to short-term financing. Ngari and Kamau (2022) observed that Kenyan dairy firms that adopted effective working capital practices managed to reduce debt levels, streamline inventory systems, and secure better credit terms from both suppliers and customers, thereby improving profitability. Similarly, Ahmed (2022) found that sound working capital policies have enabled dairy companies to invest in technology, increase production capacity, and maintain competitiveness in domestic and export markets. Despite these gains, many dairy firms continue to experience financial strain due to inadequate liquidity management and poor coordination between accounts receivable, inventory, and payables.

1.1.1 Working Capital

Working capital refers to the difference between a company's current assets and current liabilities and represents the short-term resources available to meet day-to-day operational needs (Boisjoly, Conine Jr & McDonald, 2020). It is an essential measure of a company's operational effectiveness and short-term financial health. Maintaining liquidity, fulfilling short-term obligations, and carrying on with business as usual are all made possible by effective working capital management. Accounts receivable, cash management procedures, and Payables management are some of the

essential elements of working capital; each contributes in a different and connected way to improving a company's operational and financial success.

Accounts receivable form a critical component of working capital management, representing the funds owed to a business by its customers for goods or services already delivered. According to Mohanty et al., (2023), effective management of accounts receivable ensures timely collection, minimizes bad debts, and maintains healthy cash flow. When receivables are collected quickly, firms can reinvest the cash into operations or reduce their reliance on external borrowing (Habib & Yang, 2024). However, inefficient receivables management such as lax credit policies or poor follow-up can lead to liquidity shortages and higher operational risks. Establishing clear credit terms, regularly monitoring outstanding balances, and using incentives for early payments are some strategies that can enhance accounts receivable performance and contribute positively to profitability (Chalmers, Sensini & Shan, 2020).

Cash management refers to the process of planning, monitoring, and controlling cash flows to ensure a firm can meet its short-term obligations while optimizing the use of excess cash (Barnejee, Dutta & Zhu, 2021). Efficient cash management involves maintaining an optimal cash balance neither too high to lose investment opportunities, nor too low to risk liquidity crises. Businesses that manage their cash flows effectively are better positioned to take advantage of investment opportunities, manage debt repayments, and withstand financial shocks (Abdiye, 2022). Techniques such as cash budgeting, cash flow forecasting, and daily bank reconciliation enable firms to identify cash surpluses or deficits early. For dairy companies, where cash flows can be seasonal due to milk supply fluctuations, effective cash management is particularly essential to maintain operational stability.

Payables management involves sourcing funds to support a firm's day-to-day operations, such as purchasing raw materials, paying staff, and covering utilities (Abdulnafea, Almasria & Alawaqleh, 2022). Companies can finance working capital needs through short-term credit facilities like bank overdrafts, trade credit, or commercial paper. Choosing the right mix of internal and external financing is vital to maintaining financial flexibility while minimizing costs. According to Almashhadani and Almashhadani (2022), excessive dependence on external debt may increase financial risk and interest costs, while under-financing may hinder operations. Therefore, firms must strike a balance that allows for liquidity without compromising profitability. In capital-intensive industries like dairy processing, where investment in equipment and stock is high, securing affordable and timely financing is key to ensuring smooth operations and achieving competitive advantage.

1.1.2 Profitability of Dairy Companies

Profitability is a critical measure of the financial health and performance of a business. It refers to the company's ability to generate earnings relative to its revenue, operating costs, and invested capital over a specific period (Almashhadani & Almashhadani, 2022). In dairy companies, profitability determines not only the firm's sustainability and ability to expand operations but also its capacity to deliver value to stakeholders including shareholders, employees, suppliers, and the wider economy. According to Njeru (2023), dairy companies in Kenya operate in a competitive environment marked by fluctuating milk supply, rising production costs, and dynamic consumer demands. As such, maintaining strong profitability is essential for survival and growth. Profitability metrics offer insights into how efficiently a company utilizes its assets and resources

to generate income. Two commonly used indicators in financial analysis are Return on Assets (ROA) and Net Profit Margin (NPM) as outlined by Grandhi, Patwa and Saleem (2021).

According to Lim and Rokhim (2021), Return on Assets (ROA) is a profitability ratio that indicates how effectively a company uses its total assets to generate profit. It is calculated by dividing net income by total assets. For dairy companies, this ratio reflects how well the firm is using its investments in equipment, infrastructure, transport, and storage facilities to generate returns. A higher ROA suggests greater efficiency in asset utilization, meaning the company is deriving more profit from each unit of asset it owns. Besides, NPM measures the percentage of revenue that remains as profit after all expenses, including cost of goods sold, operating expenses, interest, and taxes, have been deducted (Curtis, McVay & Toynbee, 2020). It is computed by dividing net profit by total revenue and multiplying by 100. NPM is a direct indicator of a company's ability to control its costs and convert sales into bottom-line profit.

1.1.3 Dairy Companies in Kenya

The dairy industry in Kenya has evolved into a vital pillar of the country's economy, driven by both formal processing companies and a vibrant informal market. Over the last century, the sector has undergone significant transformation from a colonial-era enterprise to a fully liberalized and commercially diverse industry (Mbichi & Maina, 2024). Currently, dairy companies play a central role in the value chain, overseeing milk collection, processing, packaging, and distribution to both local and international markets. The growth of these companies has been instrumental in modernizing the sector, enhancing food security, and creating employment for over 1.2 million Kenyans, including farmers, transporters, processors, and retail workers (Kenya Dairy Board, 2023).

The formal dairy processing segment is composed of both large-scale and medium-sized companies. Prominent among them are Brookside Dairies, New Kenya Co-operative Creameries (New KCC), Githunguri Dairies, and Sameer Agriculture and Livestock Limited. Collectively, these major processors handle about 80% of Kenya's total processed milk, estimated at 1.5 million kilograms per day (Njogu,2023). Brookside Dairies has emerged as the dominant player in the market, following years of strategic acquisitions and consolidation of smaller brands (Kyule & Nguli, 2020). This oligopolistic structure, while offering economies of scale and operational efficiencies, has also intensified competition, placing pressure on smaller and emerging dairy firms.

Currently, there are over 40 registered large and medium dairy processing companies in Kenya, alongside more than 185 licensed mini dairies (KDB, 2020). These entities are primarily regulated by the Kenya Dairy Board (KDB), which was established by an act of Parliament to oversee quality control, licensing, and sector development. Other stakeholders such as the Ministry of Agriculture, Ministry of Health, and Kenya Bureau of Standards contribute through policy formulation, food safety regulation, and standardization of dairy products. Despite the sector's strategic importance, dairy companies continue to face significant financial and operational challenges. These include inconsistent milk supply due to climatic variability, high costs of production, inadequate infrastructure for cold chain management, and limited access to affordable finance (Munya, 2021). In particular, poor working capital practices have constrained the profitability and sustainability of many dairy firms. Issues such as delayed payments from distributors, cash flow gaps, and high reliance on short-term financing have been cited as key factors undermining operational efficiency and financial performance (Kang'ethe et al.,2021).

1.2 Statement of the Problem

Kenya's Vision 2030 recognizes agriculture as a key pillar for economic transformation, with the dairy sub-sector playing a central role in food security, employment creation, and income generation. The dairy industry contributes approximately 5% to the national GDP and nearly 22% to agricultural GDP (Kenya Dairy Board, 2023). Despite its economic importance, the profitability of dairy companies in Kenya remains relatively low, estimated at between 15–25%, mainly due to persistent financial inefficiencies and weak working capital management practices (Musyoki, 2022). Many firms experience liquidity challenges, high operational costs, and delayed access to short-term financing, which undermine their capacity to operate sustainably.

Effective management of working capital components particularly accounts receivable, cash management, and short-term financing has been shown to enhance profitability and financial stability across different sectors (Anh, Huong & Hang, 2020). However, evidence from Kenya's dairy industry suggests that most companies continue to face challenges such as prolonged credit cycles, delayed customer payments, and inadequate cash flow planning. These inefficiencies have been compounded by intense market competition, fluctuating input prices, and limited managerial capacity to optimize financial resources (Mbaya, Maina & Namusonge, 2021). Moreover, firm characteristics such as age may influence how effectively companies manage their working capital, as older firms tend to have more established financial systems and credit relationships than younger ones an aspect that remains underexplored within the Kenyan dairy sector.

Empirical studies on working capital and profitability in Kenya have provided valuable insights but are constrained by methodological and contextual limitations. For instance, Wanjiru (2022) examined dairy firms in Murang'a County, limiting the generalizability of findings. Rhoda (2011) focused solely on New Kenya Cooperative Creameries, while Zavani (2024) investigated

working capital management practices among dairy processors without considering moderating variables such as firm age. These gaps highlight a lack of comprehensive and nationally representative evidence on how working capital management affects profitability across dairy firms of different ages.

Given the strategic significance of the dairy sector to Kenya's economic growth, the persistent low profitability levels, and the limited empirical understanding of how working capital components interact with firm-specific characteristics, there is a critical need for a comprehensive study. This study, therefore, sought to examine the effect of working capital management specifically accounts receivable management, cash management, and Payables management on the profitability of dairy companies in Kenya, while assessing the moderating effect of firm age on this relationship. The findings would provide practical insights for managers, policymakers, and investors in designing financial management strategies that promote profitability and sustainability within the dairy industry.

1.3 Objectives of the Study

1.3.1 General Objective

The present study was carried out to determine the effect of working capital on profitability of dairy companies in Kenya.

1.3.2 Specific Objectives

i. To determine the effect of Accounts Receivable Management on Profitability of Dairy Companies in Kenya

ii. Assessment of the influence of Cash Management on Profitability of Dairy Companies in Kenya

iii. To determine the effect of Payables Management on Profitability of Dairy Companies in Kenya.

iv. To examine the moderating effect of firm age on the relationship between working capital management and profitability of Dairy Companies in Kenya.

1.4 Hypothesis

H_{01}; Accounts Receivables Management has no significant influence on Profitability of Dairy companies in Kenya.

H_{02}; Cash Management Performance has no significant influence on Profitability of Dairy companies in Kenya.

H_{03}; Payables management has no significant influence on Profitability of Dairy companies in Kenya.

H_{04}; Firm Age has no moderating effect on the relationship of working capital and Profitability of Dairy companies in Kenya.

1.5 Justification of the Study

Working capital plays a critical role in ensuring the financial health and sustainability of dairy companies, particularly in Kenya's dynamic and competitive agribusiness environment. Despite the sector's contribution to the national economy and food security, many dairy firms struggle with cash flow constraints, delayed receivables, and inefficient financing practices, which adversely impact their profitability. By examining the effects of accounts receivable management, cash management, and liability financing on profitability, this study provides valuable insights for managers, investors, and policymakers aiming to enhance operational efficiency and financial

performance in the dairy sector. The findings would inform strategic financial decisions, support the development of effective working capital policies, and contribute to the overall growth and stability of Kenya's dairy industry.

1.6 Significance of the Study

1.6.1 Management of the Dairy Companies

This study is significant to the management of dairy companies as it provides evidence-based insights into how effective working capital practices specifically in managing accounts receivable, cash, and payables management can impact profitability. The findings will guide managers in making informed operational and financial decisions that enhance liquidity, reduce costs, and improve overall performance. By identifying which components of working capital most significantly affect profitability, managers can tailor strategies that support sustainable growth and competitive advantage in the dairy industry.

1.6.2 Policy Makers

For policymakers, the study offers crucial data that can inform the development of financial and regulatory frameworks aimed at strengthening the dairy sector. Understanding the relationship between working capital and profitability enables the creation of supportive policies that encourage financial discipline, improve access to credit, and facilitate capacity building for dairy enterprises. Such policy interventions are essential for enhancing the resilience of the dairy industry, which plays a key role in Kenya's agricultural and economic development.

1.6.3 Researchers and Academicians

To researchers and academicians, this study contributes to the growing body of literature on financial management and agribusiness performance, particularly in the context of developing economies. It presents empirical evidence on the linkage between working capital components and profitability within Kenya's dairy sector, offering a basis for further research and scholarly discussion. Moreover, the study may serve as a reference point for comparative studies and inspire academic inquiry into other agribusiness sectors facing similar financial management challenges.

1.6.4 Contribution to Development Agendas

The findings of this study support the realization of key national, regional, and global development frameworks. In alignment with Kenya Vision 2030, the study promotes economic transformation by enhancing the productivity and financial sustainability of the dairy sector—a priority area under the agricultural pillar. It also contributes to the Sustainable Development Goals (SDGs), particularly Goal 2 (Zero Hunger), Goal 8 (Decent Work and Economic Growth), and Goal 9 (Industry, Innovation, and Infrastructure), through improved agribusiness management and profitability. Furthermore, the study aligns with the African Union Agenda 2063, which envisions inclusive growth, agricultural modernization, and sustainable industrialization across Africa. By providing actionable insights on financial efficiency, the study contributes to policy and practice that advance these development agendas and foster long-term economic resilience.

1.7 Scope of the Study

This study focuses on examining the effect of working capital on the profitability of dairy companies in Kenya. The scope of the study is defined by three key working capital components: Accounts Receivable Management, Cash Management, and liability financing, which serve as the independent variables. Profitability, measured through indicators such as Return on Assets and

Net Profit Margin, constitutes the dependent variable. Geographically, the study was limited to dairy companies operating within Kenya, with a particular emphasis on medium to large-scale processing firms registered and regulated by relevant industry bodies being the Kenya Dairy Board. The research was conducted over an eleven-month period, spanning from January to November 2025, during which data was collected, analyzed, and interpreted to draw meaningful conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of the past literature on the effect of working capital on profitability of dairy companies in Kenya. The chapter presents theoretical framework, empirical literature review and a conceptual framework with a discussion of the independent study variables.

2.2 Theoretical Literature Review

A theoretical framework emphasizes on the analysis and synthesizing the extant theories, frameworks, and models pertinent to the research issue. By situating the study within the broader scholarly literature, the theoretical framework helps to clarify the research focus, guides the research design, data collection, and analysis, and underscores the significance of the study's contributions to existing knowledge (Stahl, 2023). The study has been anchored on the Trade-off Theory of Working Capital, The Liquidity-Profitability Trade-off Theory and The Cash Conversion Cycle theory to help in establishing the relationship between the study variables.

2.2.1The Trade-off Theory of Working Capital

The Trade-off Theory of Working Capital posits that companies must strike a balance between the costs and benefits of holding working capital. Working capital refers to the funds required for day-to-day operations, primarily in the form of inventory, accounts receivable, and cash. The theory suggests that holding too much working capital can be costly because of the opportunity cost of tying up capital in non-productive assets, such as unsold inventory or delayed receivables (Khoa, Anh & Duyen, 2020). However, holding too little working capital can lead to operational inefficiencies, like stockouts, production delays, or missed sales opportunities. Therefore, firms

must manage working capital carefully to ensure it supports operational needs without incurring excessive costs, maximizing both liquidity and profitability.

The development of the Trade-off Theory of Working Capital has been shaped by several scholars in the field of finance and management. Early work by Shin and Soenen (1998) and Deloof (2003) emphasized the direct link between working capital management and profitability, highlighting that firms need to find an optimal level of working capital. The theory assumes that firms can achieve a balance by evaluating the trade-offs between the cost of holding excessive working capital (such as storage, interest costs, or obsolescence) and the benefits of maintaining enough working capital to smooth operations and avoid disruptions (Olowookere et al.,2022). The assumption is that firms are constantly making decisions about how much working capital is optimal for their business model, balancing the risk of inefficiency from holding too much working capital with the risk of operational disruptions from holding too little.

For dairy companies in Kenya, the Trade-off Theory of Working Capital is highly applicable because the sector involves managing perishable goods, which requires a careful balance of inventory, accounts receivable, and accounts payable. Dairy companies need to ensure that they have enough working capital to maintain production flow, meet customer demand, and avoid stockouts, but at the same time, they must avoid overstocking, which could lead to waste or spoilage of products. The theory helps to explain how dairy companies can optimize their working capital to maximize profitability by balancing costs (like storage, spoilage, or financing) with the benefits of smooth operations, timely production, and increased sales. This balance is critical in the dairy industry, where inefficiencies in working capital management can directly affect both profitability and operational efficiency.

2.2.2The Liquidity-Profitability Trade-off Theory

The Liquidity-Profitability Trade-off Theory was primarily developed by Baumol (1952) and Miller and Orr (1966). The Liquidity-Profitability Trade-off Theory posit that businesses need to strike a balance between obtaining long-term profitability and keeping enough liquidity to cover their immediate financial obligations. The ability of a business to pay its short-term debts, including those to suppliers, personnel, and operating costs, is referred to as liquidity. Conversely, profitability is the capacity of the business to maximize its assets and resources in order to produce revenue over an extended period of time. According to the theory, businesses should make sure they have adequate liquidity to prevent insolvency and operational disruptions, but storing too much liquid assets, such as cash, may result in poorer returns and decreased profitability (Rodriguez et al., 2024). Therefore, in order to maintain the proper balance between liquidity and profitability, businesses need to manage working capital wisely.

The Liquidity-Profitability Trade-off Theory has been developed and expanded by various scholars in financial management. First, Brealey and Myers (2003) emphasized the negative correlation between profitability and liquidity, arguing that companies with more liquidity can have poorer returns since idle cash produces little to no revenue. Additional studies by Deloof (2003) and Shin and Soenen (1998) looked at the ways in which various components of working capital, including inventories, accounts payable, and receivable, can affect this trade-off. According to the principle, businesses always strike a balance between using money to make investments or expand and keeping liquidity to cover operating demands. The theory's core premise is that businesses have limited resources, thus decisions on whether to invest in assets or hold cash must be carefully considered to prevent inefficiencies or lost profit possibilities (Sherif, 2025).

The Liquidity-Profitability Trade-off Theory is highly relevant due to the sector's need for both operational liquidity and long-term profitability. In addition to investing in strategies to expand their operations and boost profitability, dairy companies must efficiently manage their working capital to guarantee they can cover short-term commitments like production costs and raw material purchases. For instance, excessive cash holdings or unsold inventory may lower profitability, while insufficient liquidity may cause supply chain or production disruptions. Thus, this theory is essential for improving working capital management in the sector since it offers a framework for comprehending how Kenyan dairy companies may strike a balance between their immediate liquidity requirements and long-term profitability-boosting tactics.

2.2.3The Cash Conversion Cycle (CCC) theory

The Cash Conversion Cycle (CCC) theory, developed by Verlyn R. and Eugene L. in the 1980s, focuses on optimizing working capital management to enhance a firm's financial operations (Savino, 2020). This theory explains the time it takes for a company to convert its current assets, such as accounts receivable, into liquid cash. Essentially, the CCC theory examines the duration required by an organization to turn its liquid assets and cash equivalents into the necessary cash for covering operational costs and fulfilling financial obligations (Johan, Kayani & Naeem, 2024). In the context of this study, the CCC theory is crucial for understanding how efficiently chartered public universities collect accounts receivable, like student fees, in the shortest time possible to ensure they can meet operational expenses without facing penalties. The theory also evaluates the time it takes an institution to settle its financial obligations, such as paying vendors, without incurring late fees. Universities with shorter CCC periods, demonstrated by higher cash ratios, are

considered financially efficient and perform well. Conversely, those with longer CCC periods are seen as inefficient and financially unstable (Oseifuah & Gyekye, 2017).

Over time, Keynes (1936) and later scholars, such as Baumol (1952), built on the concept, linking it to broader financial theories of liquidity and firm performance. They understood that businesses needed to balance maintaining sufficient working capital with maximizing cash flow to ensure profitability. By conducting empirical tests of the connections between working capital components (such as inventory management, accounts receivable, and accounts payable) and business profitability, researchers such as Deloof (2003) and Shin and Soenen (1998) also made contributions to the theory. According to their research, businesses with shorter CCCs typically have higher profitability, underscoring the significance of efficient working capital management for preserving financial stability. The Cash Conversion Cycle (CCC) theory assumes that a company's working capital management can be optimized by balancing the time taken for inventory turnover, receivables collection, and payables management (Zaher & Illescas, 2022). Additionally, it assumes that effective management of these elements will have a direct impact on a business's liquidity, profitability, and general financial well-being, with shorter cycles translating into better performance.

The Cash Conversion Cycle (CCC) theory is relevant to dairy companies in Kenya due to the perishable nature of dairy products, which requires efficient inventory management to minimize wastage and optimize cash flow. Dairy businesses can lessen their dependency on outside funding, increase liquidity, and eventually boost profitability by efficiently controlling the time it takes to turn inventory into sales (inventory turnover), collect receivables, and extend payables. In a competitive market, the CCC theory offers a framework for comprehending how

dairy companies should manage these working capital components to optimize financial performance and streamline operations.

2.3 Empirical Literature Review

2.3.1 Accounts Receivables Management on Profitability

Rahayu, Ardina and Sumartana (2020) conducted an "Analysis of uncollectible receivables and their impact on profitability at The Legian Bali." Credit sales data, accounts receivable aging schedule data, accounts receivable policy data, and profit/loss data were all employed in this study. the information gathered by observation, documentation, and interviewing. Using financial ratio formulas, the analytical method included descriptive and quantitative analysis methodologies. According to the study's findings, there are still a lot of past-due accounts receivable that have not been collected. The average collection days for accounts are longer since there is a lower transition of accounts receivable into cash due to the high proportion of uncollectible accounts. Because there will be more unpaid accounts receivable and the hotel receivables collection ratio will be lower, a longer period of time for collecting accounts receivable will result in a larger risk of bad debts.

Yoon and Lee (2021) carried out a study on "the effect of representative competency of SMEs on accounts receivable management and management performance." EFA, reliability analysis, CFA, and model fit were used to validate the study model, and a SEM was used to confirm the hypothesis. Consequently, the management of accounts receivable was positively impacted by the representative's manager competency, whereas the management of credit control was negatively impacted by their entrepreneurial competency. Management performance was positively (+) impacted by the management of accounts receivable. In the mediating test, the

relationship between entrepreneurial competence and firm performance was negatively impacted by credit control management, whereas it was positively impacted by credit sales management. The findings indicate that representative competency is a significant factor and that in order to improve management performance, it is necessary to develop management competencies like finance, the use of management resources, and knowledge of accounts receivable. Additionally, stable account receivable management requires managing accounts receivable based on customer credit and insurance. Future studies on the effects of outside variables like government assistance and consulting, as well as the management of accounts receivable, are necessary.

Al-Fahad and Hassan (2021) conducted a study on "Accounts receivable management and profitability of listed firms in Saudi Arabia." Using a dataset of non-financial companies listed on the Tadawul Stock Exchange between 2010 and 2019, the study investigated the connection between credit policy practices and firm profitability. The system generalized method of moments (GMM) estimator was used in the study to take firm-specific heterogeneity and possible endogeneity into consideration. Because businesses could reinvest money more effectively, the results showed that shorter receivables collection periods greatly increased profitability. However, it has been demonstrated that excessively stringent lending terms inhibit sales growth, offsetting any profitability improvements. The consistency of the findings was validated by robustness testing that included lag structures and alternative profitability proxies. This study contributes to the body of knowledge by highlighting the trade-off faced by Saudi firms in balancing credit extension with liquidity preservation, emphasizing that efficient accounts receivable management is a vital determinant of profitability in emerging economies.

Mittal and Monika. (2020) carried out a study on "Accounts receivable: payable impact on each other with special reference to profitability; a study of small cap companies in India. For a

sample of 193 BSE small-cap manufacturing companies in India from 2011 to 2019, the researchers looked at the effects of giving and receiving trade credit on financial performance. Data analysis techniques include included regression, correlation, the Levin, Lin, and Chu Unit root test, and the Granger causality test. The results indicated that the utilization of accounts payable was impacted by accounts receivable. As a result, accounts payable had a negative and substantial impact on profitability, but it had little bearing on the company's overall worth. The outcome suggests that a company's profits and worth can be increased by the application of accounts payable, which is influenced by efficient accounts receivable management. Managers of SMEs can utilize the current study to assess the capital structure and financial performance.

In Japan, Yoon and Lee (2021) conducted a study titled "The Effect of Representative Competency of SMEs on Accounts Receivable Management and Management Performance." Exploratory factor analysis (EFA), reliability analysis, confirmatory factor analysis (CFA), and model fit tests were applied in order to test the research model, and hypotheses were tested through the structural equation modeling (SEM). The findings revealed that accounts receivable management was positively influenced by the representative's managerial competency, while entrepreneurial competency negatively affected credit control management. Management performance, in terms of profitability, was positively affected by the accounts receivable management. In mediation analysis, reduced performance of credit as a credit control management mediated in a negative way between entrepreneurial competence and firm performance, but credit sales management mediated in a positive way. The analysis indicated that managerial skills including financial skills and resource allocation were essential in strengthening the practices of accounts receivables to increase profitability. It further stressed or highlighted the necessity of consistent accounts receivable management pegged on client credit analysis and insurances. The

authors recommended future research to explore external factors, such as government support and consulting, on accounts receivable management in Japanese SMEs

Dan (2020) carried out a study on “Account receivable management and corporate performances: Empirical evidence from quoted manufacturing companies in Nigeria.” Ordinary least square (OLS) regression was utilized as an econometric tool to evaluate the hypotheses, and secondary data was taken from the sampled companies' public financial reports. The term of accounts receivable serves as the explanatory variable, and return on assets serves as a stand-in for company success. Furthermore, company size and leverage control the study. According to the study's findings, the return on assets of Nigerian listed manufacturing companies and the term of accounts receivable have a favorable relationship. In conclusion, this study rejected the null hypothesis, which holds that the period of time that accounts receivable has no significant impact on the return on assets of quoted manufacturing firms in Nigeria, and accepts the alternative hypothesis, which states that the period of time that accounts receivable has a significant impact on the return on assets of quoted manufacturing firms in Nigeria. In order to fulfill the demands of the expansion and operation processes and to fulfill the goals of the shareholders by increasing their wealth, the study advises management to focus on the continuous calibration between liquidity and performance.

Mthembu and Nkosi (2022) carried out a study on “The effect of accounts receivable practices on firm profitability: Evidence from South African manufacturing firms.” The study examined the accounts receivable turnover ratio and its impact on profitability metrics including return on equity (ROE) and return on assets (ROA) using panel data spanning 2011 to 2020. To account for firm-level unobserved effects, the authors used a fixed-effects regression model that was validated by Hausman specification tests. As prompt collections decreased the risk of bad

debts and improved cash flow, the results showed that an effective turnover of receivables had a favorable and considerable influence on profitability. On the other hand, businesses with longer collection periods saw a decrease in returns, mostly as a result of higher financing costs and less liquidity. Sensitivity analysis validated that the results were robust. By highlighting the crucial role receivables management plays in maintaining profitability within capital-intensive manufacturing enterprises, this study enhances empirical evidence from the African environment.

Adebowale And Dada (2022) conducted a survey on "Account receivables management and performance of pharmaceutical firms in Nigeria." Descriptive analysis, correlation analysis, ordinary least squares regression analysis, and Granger causality analysis were used to analyze the collected data. The results indicated that the return on assets was significantly impacted negatively by the accounts receivable ratio (ARR), with an estimated coefficient of -0.169169 ($p = 0.0123$ 0.05). The bad debt ratio (BDTR) showed a slight negative impact on return on assets, with an estimated coefficient of -0.086698 and a significance level below 0.05. Meanwhile, with an estimated coefficient of -2.98E-08 and a significance level of $p=0.0667>0.05$, the study demonstrated that sales growth (SG) had a small but negative impact on return on assets.

Another relevant study in Uganda by Adeboboye et al. (2022) explored the "Impact of Accounts Receivable Management on the Financial Performance of Savings and Credit Cooperative Societies (SACCOs) in Sheema Municipality." The research adopted a descriptive research design employing a sample consisting of 106 respondents who were subjected to multiple regression analysis of data gathered through questionnaires. The findings revealed that accounts receivable management significantly impacted positively on the financial performance as compared to cash management and accounts payable management that were insignificant. The study highlighted those efficient accounts receivable practices, such as timely debt collection and

credit policy enforcement, were crucial for SACCO's profitability in Uganda's financial sector. The results indicate that solid receivable administration may alleviate the liquidity issues and lead to the increase of financial health, especially in cooperative-based organizations. These findings were recommended to be verified by conducting additional research on the joint impact of working capital elements in different Ugandan industries and particularly agriculture.

Owuor, Agusioma and Wafula (2021) carried out a study on "Effect of accounts receivable management on financial performance of chartered public universities in Kenya." The Cash Conversion Cycle (CCC) hypothesis was applied in the investigation. Data analysis was done using both descriptive and inferential research methodologies. Since all 31 of Kenya's chartered public universities were the target population, data was gathered using the census survey approach. The corresponding institutions audited annual reports for the years 2017, 2018, and 2019 were the source of secondary panel data. The analysis of both descriptive and inferential statistics was done using SPSS Version 25. According to the study, the financial performance of Kenya's chartered public universities was significantly and indirectly impacted by accounts receivable management ($p=0.000$, $\beta= -0.875$). According to the study's findings, Kenyan chartered public universities' financial performance and profitability are significantly impacted by their accounts receivable management. In accordance with IFRS 5 and IAS 1, the study suggested that university administrations create the best debt management frameworks to direct their financial management activities and achieve long-term and short-term sustainable financial performance.

2.3.2 Cash Management Practice on Profitability

Laghari et al., (2023) carried out a study on "Cash flow management and its effect on firm performance: Empirical evidence on non-financial firms of China." The ability of the GEEs

method to reliably estimate regression coefficient variances for data samples with good correlation between repeated measurements is its primary benefit over other estimation strategies. The study's conclusions demonstrate that a decrease in cash flow metrics and measures significantly improves a company's financial performance. According to empirical data, low leverage firms exhibit a greater degree of performance improvement levers, such as cash flow measures and metrics. This implies that modifications to these metrics have a greater positive impact on the financial performance of low leverage firms in comparison to high leveraged firms. Following endogeneity mitigation using the dynamic panel system generalized method of moments (GMM) and sensitivity analysis considering the robustness of the primary findings, the conclusions remain valid. The study adds to the body of knowledge on working capital and cash flow management. This work is one of the few that examines experimentally the relationship between cash flow metrics and measurements and business performance from a dynamic standpoint, particularly in the context of Chinese non-financial firms.

In Canada, while direct studies on cash management practices in the dairy sector are scarce, broader research on financial management provides relevant insights. Tran et al. (2020) conducted a study titled “Cash Flow Management and Firm Performance: Evidence from Canadian Manufacturing Firms Original article, based on a panel data design with regression analysis conducted on 150 Toronto Stock Exchange-listed firms, 2015- 2019. According to the study, good cash management especially in terms of cash conversion cycle and adequate liquidity brought a significant positive impact on the profitability ($\hat{I}^2 = 0.42$ and $p < .05$). The findings revealed that companies that experienced a shorter cash conversion cycle and high quality of activities in cash budgeting had high return on asset (ROA) because of less liquidity risk, and superior operational efficiency. It highlighted the need to forecast cash proactively and manage inventory to improve

profitability and suggested that Canadian corporations integrate the use of sophisticated cash management systems in order to address the limitations of the financial constraints. Further research was suggested to explore sector-specific applications, such as agriculture, to validate these findings in contexts like the dairy industry.

Kaya and Demir (2022) examined how cash management practices influence the profitability of manufacturing firms in Turkey using panel data covering a ten-year period from 2010 to 2020. The study analyzed a large sample of companies listed on the Borsa Istanbul exchange and applied the system generalized method of moments (GMM) estimator to address issues of endogeneity and multicollinearity. The findings revealed that efficient cash management, particularly minimizing idle cash balances and improving receivables collection, had a significant positive effect on firm profitability. The study further established that firms adopting proactive liquidity management strategies performed better during economic downturns. The robustness of these results was confirmed through sensitivity analyses, underscoring that in emerging markets, effective cash management is a critical determinant of corporate profitability. This study contributes to financial management literature by highlighting the importance of liquidity control and cash flow efficiency in strengthening firm performance in Turkey.

Svensson and Larsson (2023) explored the influence of cash holding policies on the profitability of service sector companies in Sweden using panel data collected from 2012 to 2021 for firms listed on the Stockholm Stock Exchange. Employing a fixed-effects regression model, they analyzed how cash retention and disbursement practices affected firm performance. The study found that companies maintaining optimal cash balances achieved superior profitability, as reflected by higher return on assets (ROA) and return on equity (ROE). Conversely, firms with cash shortages faced higher borrowing costs due to dependence on short-term financing, while

excessive cash holdings reduced profitability by limiting potential investment returns. The findings supported the trade-off theory of cash management, emphasizing the balance between liquidity needs and opportunity costs. Overall, the study provided empirical evidence from a developed economy perspective, highlighting that strategic cash management policies are vital for enhancing profitability and financial stability in Swedish service firms.

Zada, Yukun, and Zada (2021) examined how financial management practices affect the growth and financial performance of small-to-medium forest enterprises (SMFEs). Data were collected through structured questionnaires from 260 enterprise owners, finance managers, and accounting officers. The study tested five hypotheses using statistical analysis and found that efficient financial management practices positively and significantly influenced firm performance and growth. The findings demonstrated that firms adopting sound financial management techniques achieved stronger financial results and business expansion. The study concluded that effective financial management is central to small business sustainability and provides practical insights for entrepreneurs, managers, and policymakers seeking to enhance the financial health of SMFEs.

Folajinmi and Peter (2020) investigated the relationship between financial management practices and the performance of small and medium-sized poultry enterprises in Ogun State, Nigeria. Using a survey design, data were collected from 150 farm owners and managers selected through a multi-stage sampling approach from a population of 200 poultry farms registered with the Poultry Association of Nigeria. Reliability was confirmed through Cronbach's alpha, and validity was ensured through expert review. The results showed that key aspects of financial management had a significant positive effect on profitability. The findings suggested that poultry

enterprises adopting structured financial management practices achieved better financial outcomes and sustained growth.

In South Africa, Naidoo and Maseko (2015) assessed the impact of cash management on profitability and sustainability among small retail businesses in the Tongaat area of KwaZulu-Natal. Using a descriptive, quantitative, and cross-sectional design, data were obtained from 200 small retailers through structured questionnaires. Correlation and regression analyses revealed a strong positive relationship between cash management knowledge and profitability ($r = 0.67$, $p < .01$). Firms that practiced effective cash budgeting and liquidity monitoring reported higher profitability and were better positioned for long-term survival. The study concluded that organized and proactive cash management enhances firm sustainability even in resource-constrained environments and recommended cash management training programs for small business owners, as well as further research focusing on specific industries such as agriculture and dairy to uncover sector-specific financial management dynamics.

In Rwanda, Nkurunziza and Ndagijimana (2018) examined the effect of cash management on the financial performance of cooperative banks, focusing on Zigma CSS. The study adopted a descriptive research design and sampled 108 employees from a population of 148. Data were collected through questionnaires and document reviews. Results from multiple regression analysis revealed a strong positive correlation between cash management practices and financial performance ($R^2 = 0.78$, $p < .01$), with cash control, cash planning, and budgeting emerging as the key drivers of profitability. The study concluded that effective cash management was central to maintaining liquidity and improving profitability within cooperative banks in Rwanda, a finding that resonates with the operational structure of dairy cooperatives. The researchers recommended adopting advanced cash management systems such as automated forecasting tools to strengthen

liquidity control. They also proposed further research on how external factors, such as regulatory frameworks, influence cash management practices within Rwanda's agricultural and cooperative sectors.

Eton, Fabian, and Eliab (2023) investigated the relationship between financial management practices and the profitability of small-scale businesses in Kabale Municipality, Uganda. The study used both descriptive and correlational research designs and applied multiple regression analysis to determine the effect of financial management strategies on profitability. The findings revealed that financial management practices, particularly working capital and cash management, had a significant impact on business profitability. The study emphasized that small businesses must adopt sound financial management strategies to enhance profitability and sustainability. It further recommended that business owners should closely monitor cash flow and working capital levels while adopting cost management measures to balance operating expenses with profitability outcomes.

In Kenya, Nasimiyu (2023) studied the relationship between cash flow management practices and the financial performance of small and medium enterprises. The study was grounded in the Free Cash Flow Theory and the Dynamic Trade-Off Theory, which highlight the importance of balancing liquidity and investment decisions. The findings confirmed that cash accountability, internal control mechanisms, cash planning, and the establishment of clear cash management policies significantly improve profitability, liquidity, and solvency. The study concluded that efficient cash flow management is essential for SMEs seeking to enhance profitability, sustain growth, and ensure financial stability. It also provided practical insights for policymakers, practitioners, and researchers interested in improving SME performance through effective financial management practices.

2.3.3 Payables Management on Profitability

Högerle et al. (2020) analyzed the relationship between working capital management, profitability, and shareholder value using panel data from 115 firms listed on Germany's Prime Standard between 2011 and 2017. Regression analysis revealed that efficient working capital financing—particularly maintaining a shorter cash conversion cycle and optimal short-term debt strategies—significantly improved profitability, measured through return on assets (ROA), and enhanced shareholder value. The findings indicated that firms with moderate financing policies balancing short-term and long-term funding achieved higher profitability than those heavily reliant on short-term debt, which heightened financial risk. The study contributed to the understanding of payable management by linking it with operational requirements and suggested further research on the influence of external economic factors on financing decisions in specific sectors such as manufacturing and agriculture.

Briones, Camino-Mogro, and Navas (2024) examined how working capital and cash flow management affect the profitability of micro, small, and medium enterprises (MSMEs) in Ecuador. Using a two-step generalized method of moments (GMM) approach, the study analyzed data from 19,680 firms between 2000 and 2020 while addressing endogeneity and multicollinearity issues. The results showed that MSMEs dependent on working capital achieved higher average returns than capital-intensive businesses. The study concluded that smaller enterprises tend to allocate more resources to current assets, which enhances profitability by improving liquidity and operational efficiency.

Mazreku, Morina, and Zeqaj (2020) explored the impact of working capital management on the profitability of commercial banks in Kosovo using data from the Central Bank and selected

commercial banks. Over a five-year period, several indicators, including return on assets, current ratio, debt ratio, and bank size, were analyzed through econometric models. The findings revealed that the debt ratio had a negative influence on profitability, whereas bank size and the current ratio positively affected performance. These results underscore the importance of maintaining balanced working capital policies and prudent leverage management within the banking sector.

Kim and Park (2019) investigated the impact of working capital management on firm profitability among 200 non-financial firms listed on the Korea Exchange between 2012 and 2018. Using panel data regression and the generalized method of moments (GMM), the study found that aggressive payables management, which relied more on short-term liabilities, had a mixed impact on profitability. While such strategies reduced financing costs and improved ROA among financially stable firms ($\beta = 0.35$, $p < .05$), they negatively affected highly leveraged firms due to increased financial risk. The authors recommended adopting balanced financing approaches and called for further research examining sector-specific effects, particularly in agriculture-related industries. Yuji (2021) analyzed payables management strategies and profitability among small and medium enterprises (SMEs) across Asia using a ten-year panel dataset and fixed-effects regression. The study revealed that firms relying on short-term financing to fund current assets experienced higher short-term profitability but faced greater long-term financial risk due to over-dependence on short-term debt. The authors concluded that a balanced financing structure is crucial to achieving sustainable profitability and maintaining financial stability.

Oladimeji and Aladejebi (2020) studied the effect of working capital management on the profitability of small and medium enterprises in Nigeria using secondary data from financial statements between 2014 and 2018. Regression analysis showed no significant relationship between working capital variables and profitability during the study period. The researchers

suggested that policymakers should support SME growth through favorable credit policies and that businesses should adopt efficient working capital strategies to strengthen liquidity and profitability. Elsewhere, Amponsah-Kwatiah and Asiamah (2021) assessed how working capital management affects profitability among listed manufacturing firms in Ghana using a generalized least squares (GLS) regression model based on 5,295 firm-year observations between 2009 and 2018. The study found that inventory turnover, average receivables, average payables, and cash conversion cycle negatively influenced profitability. However, a non-linear (U-shaped) relationship was observed, indicating that moderate levels of these variables could improve firm performance. These results provided useful insights for managers on optimizing investment policies to enhance capital efficiency.

Aradi (2023) analyzed the effect of liability financing sources on profitability among listed manufacturing firms in Africa using a generalized method of moments (GMM) estimator. The results showed that trade credit and short-term bank loans positively influenced profitability by supporting operations without tying up long-term capital. Nonetheless, excessive reliance on short-term financing reduced profitability during credit market tightening. The study recommended diversifying financing sources and improving credit management to sustain profitability. In Ethiopia, Tesfa (2024) investigated the effect of capital structure on performance among 85 manufacturing companies between 2017 and 2021. Using a two-step system GMM model, the study revealed that higher reliance on short-term debt negatively affected profitability ($\beta = -0.28$, $p < .01$), supporting the pecking order theory. The negative relationship was attributed to underdeveloped capital markets and high borrowing costs. The study suggested adopting balanced liability financing strategies and called for sector-specific research, especially in agriculture and dairy.

In Kenya, Wambia and Jagongo (2020) examined the effects of working capital management practices on the financial performance of insurance companies. Using a descriptive research design, data were collected from 141 financial managers, accountants, and underwriters across 47 insurance firms. The findings showed that companies employing matched, conservative, or aggressive working capital strategies achieved varying financial outcomes, with effective working capital management positively influencing profitability. The study recommended continuous review of financial management policies and the recruitment of qualified professionals to enhance operational efficiency and financial performance in Kenya's insurance sector.

2.3.4 Moderating Role of Firm Age

The age of a firm, measured as the number of years since its establishment or operational start, has been recognized in empirical research as a significant moderating variable influencing the relationship between working capital management and firm profitability. Research shows that the aged firms tend to have more experience in the operation of their firms, relationship with the market, and resource accessibility which increase the effectiveness of working capital practices. For instance, Yazdanfar and Ãhman (2021) found that older Swedish firms managed accounts receivable more efficiently due to refined credit policies, strengthening the positive impact on profitability compared to younger firms with less developed systems. Similarly, GarcÃ-a-Teruel and MartÃ-nez-Solano (2019) observed that older firms in Spain maintained stable cash management practices, which amplified the effect of liquidity management on profitability. The findings are that the effect of firm age mediates in that older firms are able to use more working capital effects to ensure that they attain greater financial performance.

In the context of liability financing, firm age also plays a critical moderating role. Baños-Caballero et al. (2022) demonstrated how the older Spanish firms were better placed to capitalize on aggressive financing techniques, like the use of short-term debt, by virtue of its proven creditworthiness and less risky financial position. This is as opposed to younger firms who usually incur more costs in borrowing and cannot easily access liquidity which restricts its ability to translate its finance strategy into its part in profitability. Also, Coad et al. (2020) discovered that higher profitability when using operations strategies, such as working capital management, was higher in those older European firms owing to economies of scale and market experience. Abor, (2007) in African settings reported that Ghanaian companies aged over in agriculture-based sector such as dairy business as stock batteries were more profitable in the working capital management as they were more stable and could access resources due to their maturity. These studies point out that firm age moderate's relationship strength and direction of association between working capital practices and profitability.

Despite the evidence, there is a gap in the literature regarding firm age as a moderator in the Kenyan dairy industry, particularly in how it influences the impact of working capital management on profitability. The Kenyan dairy sector, characterized by a mix of cooperatives and private firms, operates in a unique economic context where firm age may reflect market resilience and operational efficiency. Wambugu et al. (2018) suggested that older Kenyan agricultural firms, including those in dairy, benefited from better credit access and stable cash flows, which enhanced the profitability effects of working capital management. Incorporating firm age as a moderator in your study adds novelty by addressing this understudied context, offering insights into how organizational maturity shapes financial outcomes in Kenya's dairy industry. This approach can

reveal whether older dairy firms, with established networks and systems, derive greater profitability from working capital practices compared to younger, resource-constrained firms.

2.4 Conceptual Framework

A conceptual framework refers to a structured and coherent set of concepts, assumptions, expectations, and theories that serves as the foundation for a research study (Maleeha, 2019). It provides a lens through which the researcher views the problem being studied and is used to guide the collection and analysis of data. The framework illustrates the relationships between variables and helps to identify key factors that influence the research outcomes.

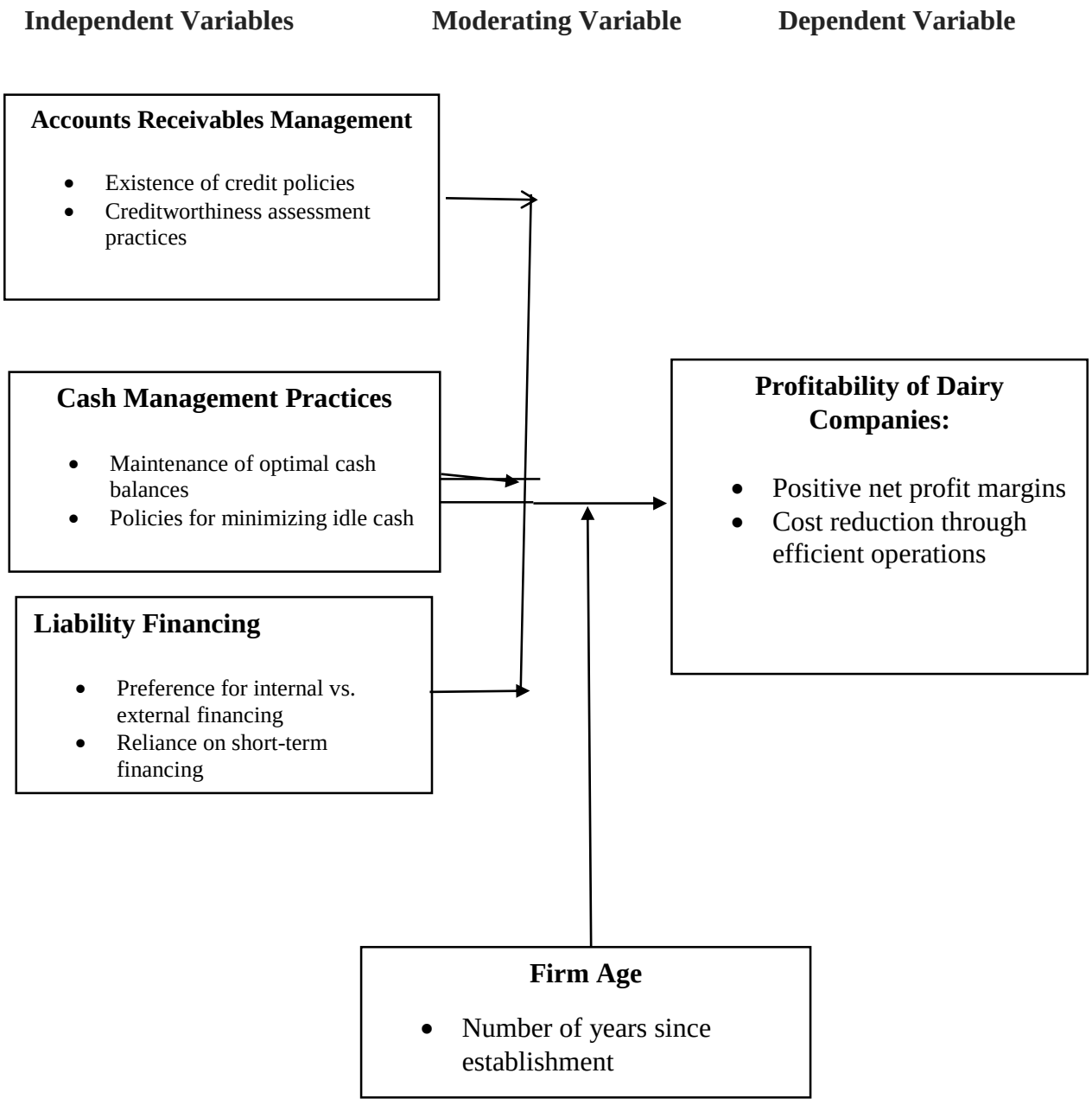

FIGURE 1

Conceptual Framework

2.5 Operationalization of Variables

TABLE 1

Operationalization of Study Variables

Variable	Indicator(s)	Measurement Scale	Methods of Analysis
Accounts Receivables Management	• Existence of credit policies • Creditworthiness assessment practices	- 5 Likert Scale	- Descriptive, correlation and regression
Cash Management Practices	• Maintenance of optimal cash balances • Policies for minimizing idle cash	- -5 Likert Scale	- Descriptive, correlation and regression
Liability Management	• Preference for internal vs. external financing • Reliance on short-term financing	- 5 Likert Scale	- Descriptive, correlation and regression
Firm Age	• Number of years since establishment	- 5 Likert Scale	- Descriptive, correlation and regression
Profitability of the Company *(Dependent Variable)*	• Positive net profit margins	- 5 Likert Scale	- Descriptive, correlation and regression

- Cost reduction through efficient operations

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides an overview of the research design, research approach, target population, sample design, data collection methods, operationalization of variables and research procedures. The chapter has also presented a comprehensive understanding of the data analysis and presentation techniques as well as chapter summary.

3.2 Research Design

Research design constitutes a framework for data collection, measurement, and analysis, balancing practicality and communication efficacy (Gupta & Gupta, 2022). This study adopted the descriptive correlational research. This design allowed for the examination of relationships between variables, without manipulating the variables themselves, which is ideal for exploring the effect of working capital management (e.g., accounts receivable management, cash management, and Liability Financing) on the profitability of dairy companies in Kenya. Besides, the design suited the study in the essence that the study could use statistical methods to analyze the relationships between the variables and assess their impact on profitability.

3.3 Target Population

The term population describes the full group of individuals, things, or occurrences that the researcher is interested in and that have a common attribute. A number of parameters, including

age, gender, educational attainment, geographic location, and other pertinent variables, can be used to characterize the population (Taherdoost, 2022). The study population comprised 40 major dairy processing companies registered with the Kenya Dairy Board. For the purposes of this study, the unit of analysis consisted of dairy processing companies operating in Kenya. The unit of observation focused on key stakeholders involved in the management and financial operations of these companies, specifically the finance managers from the 40 selected dairy firms.

3.4 Sampling and Sampling Procedure

According to Opie (2019), sampling design involves determining the sample size, selecting the sample, and identifying the units in the sampling frame. The study adopted a purposive sampling approach to select finance managers, as they are the key informants responsible for financial decision-making and working capital management within dairy companies.

Although there are many registered dairy firms in Kenya, the study focused on 40 major dairy processing companies registered with the Kenya Dairy Board (KDB). These firms were selected based on their scale of operations, formal registration status, and consistency in producing audited financial reports, which made them suitable for reliable data collection and analysis. The selected companies collectively represent the largest share of Kenya's processed milk market, thus providing a credible reflection of the sector's financial management practices.

3.5 Research Instrument

The research utilized structured questionnaire to achieve collection of quantitative data. According to Mukherjee (2019), structured questionnaire combines the consistency of structured questionnaires with the flexibility of open-ended questions, enabling researchers to collect in-depth data on the effect of working capital on profitability of dairy companies in Kenya while still facilitating comparison across responses. The Quantitative data was collected using a structured

questionnaire with subsections based on the variables under study, utilizing a 5-point Likert scale ranging from “strongly disagree” to “strongly agree” for the dependent, independent, and moderating variables. There were some open-ended questions in each segment to help provide further context for the Likert scale responses. All the managers within the dairy companies received the questionnaires through their official emails, and calls were made to encourage prompt completion and return. Additionally, physical visits were conducted to some of the dairy firms for questionnaire collection, while others were expected to complete the questionnaires, scan and share through emails.

3.6 Pilot Study

A pilot study, as defined by Lowe (2019), is a preliminary small-scale version or trial run conducted to evaluate the functionality of research tools and prepare the ground for the main study. In this study, a pilot test was carried out to ensure the validity and reliability of the data collection instrument and to assess the effectiveness of the questionnaire in capturing the intended information. According to Teresi et al. (2022), a pilot test serves as a practice run for the main survey and replicates its procedures, highlighting its importance in refining research tools. The pilot study was conducted at Ravine Dairies, one of the rapidly growing milk processors in Kenya’s dairy sector. To ensure representativeness, the pilot involved four finance managers drawn from four licensed mini dairies selected from the 185 mini dairies registered by the Kenya Dairy Board. These participants were chosen because they perform similar financial management roles to those in larger dairy processing firms, making them suitable for testing the research instrument. The results from the pilot study helped identify ambiguities in the questionnaire, assess the clarity of questions, and highlight potential challenges that could arise during the main data collection exercise.

3.6.1 Reliability of the Research Instrument

According to Zikmund et al., (2019) reliability is the internal consistency of a measure. To ensure the reliability of the research instrument, an internal validity approach was applied using Cronbach's alpha co-efficient. The SPSS technique was used to determine Chronbach's alpha co-efficient, and once the reliability index exceeds 0.750, it was considered sufficient to ensure trustworthiness. According to Lim and Yusuf (2019), a reliability level of 0.7 or above is considered acceptable. The overall alpha value varies from 0 to 1.0. The results of the pilot study were used to calculate the reliability of the research instrument. If the Cronbach alpha value exceeds 0.7 then the research instrument would be considered reliable for the data collection exercise.

3.6.2 Validity of the Research Instrument

Sileyew (2019) defines validity as the measure of whether an investigation accurately captures and evaluates the truth of its findings. During the analysis, only pertinent questions should be raised. To ensure this, questionnaires were distributed to diversification experts who assessed the relevance of the inquiries in relation to the report's objectives. The validity of the tools was assessed using the Content Validity Index (CVI). Additionally, supervisors and research experts will evaluate the instruments to affirm their validity.

3.7 Research Procedures

The researcher obtained an introduction letter from KCA University to facilitate data collection from the respondents. In addition, a research permit was obtained from NACOSTI, which authorized the researcher to seek informed consent from the respondents prior to data collection.

Given the large number of respondents, two research assistants were enlisted to aid in the data collection process after receiving appropriate training. The study adopted a drop-and-pick-later data collection approach, whereby the research assistants delivered questionnaires to respondents within the 40 dairy companies and collected them at a mutually agreed-upon later date. This approach allowed respondents sufficient time to consider and provide objective answers to the research questions, thereby enhancing response rates and ensuring their comfort during participation.

3.8 Data Analysis and Presentation

After completion of data collection exercise, the study instrument will undergo thorough cleaning and review to ensure consistency and completeness. As outlined by Patel and Patel (2019), data analysis serves three primary objectives: understanding the data, assessing its quality, and evaluating study hypotheses. Sileyew (2019) defines data analysis as the process of organizing and structuring raw data to extract valuable insights. The study focused primarily on gathering quantitative data. Descriptive statistics, including percentages, means, standard deviations, and frequencies, were utilized to analyze the quantitative data. The Statistical Package for Social Sciences (SPSS) version 26 was employed due to its efficiency in managing both small and large datasets, as noted by Berman et al. (2020). In addition, inferential statistics were used to determine the nature of relationships between the variables under investigation. Content analysis was applied to the qualitative data collected from interviews, with key themes and explanations obtained from industry experts. An Excel sheet was also used in the quantitative data analysis process. The themes were aligned with the research questions and were used to triangulate the quantitative findings, providing clarity at the interpretation stage of the study. The results were presented using frequencies, tables, and bar graphs to enhance clarity and understanding.

The analysis was guided by the analysis of the model below:

$$Y=ß_0+ß_1ARM+ß_2CMP+ß_3PM+e\ldots\ldots\ldots\ldots\ldots\ldots i$$

$$Y=\beta_0+\beta_1ARM+\beta_2CM+\beta_3PM+\beta_4FA+\beta_5(WC\times FA)+\varepsilon\ldots\ldots\ldots\ldots\ldots\ldots ii$$

Where,

Y=Profitability of the dairy company

$ß_0$=is the regression constant

$ß_1$, ß2, ß3, ß4 and ß5= coefficients of the independent variables

ARM= Accounts Receivables Management

CMP= Cash Management

PM= Payables Management

FA= Firms' Age (moderator)

e =standard error

3.9 Diagnostic Tests

3.9.1 Linearity

Linearity is a statistical test is used to determine whether a linear model can adequately describe the connection between two variables (Sauders, 2021). Stated differently, the test determines if the variation in the dependent variable corresponds with the variation in the independent variable (s). Many functional forms (linear, log-linear, log-log, and so on) illustrate how the parameters and disturbance error enter the equation. This is known as linearity. rather than the relationship

between the variables (Pandey, 2019). Linearity was determined by assessing the correlation between the study's explanatory and outcome variables, as recommended by Thomas (2021). Non-linearity in one or more variables can be treated by identifying and eliminating outliers from the analysis, transforming one or both variables, or adding new variables to capture the non-linear portion of the relationship (Hair et al., 2018; Saunders et al., 2021). Scatter plots were used to visually represent the relationship between the variables in this study and to test for linearity. According to Kumari et al. (2023) the Pearson correlation coefficient was utilized to determine the linearity of the variables A correlation value of zero indicates that no relationship exists.

3.9.2 Normality Data

Normality stands as a fundamental assumption underpinning multivariate investigations (Patel & Patel, 2019). It refers to the extent to which the distribution of sample data resembles the normal distribution, as elucidated by Thomas (2021). Normality indicates the likelihood that observations are suitably modeled by a normal distribution, a crucial aspect given that multiple regression analysis relies on this assumption (Field, 2019). The validity of parametric tests commonly used in research hinges on the assumption of normality, as emphasized by Gutpa and Gutpa (2022), warranting the conduct of a normality test. The investigation employed both graphical methods and statistical testing, particularly the Shapiro-Wilk test (Kumari et al., 2023). The Shapiro-Wilk statistic, ranging from 0 to 1, with a probability exceeding 0.05, suggests a normal distribution, according to Pandey (2019). Conversely, probabilities below 0.05 indicate deviations from normality. Similar criteria will guide this investigation.

3.9.3 Heteroscedasticity

Heteroscedasticity becomes a crucial consideration in the diagnostic analysis of data sourced from multiple companies. It occurs when the dispersion of dependent variable data points exhibits varying degrees of variance across different independent variables (Kumari et al., 2023). To identify heteroscedasticity, the Breusch-Pagan-Godfrey test will be employed (Garson, 2019). Should heteroscedasticity be detected, robust regression models, specifically weighted least squares was utilized to address the issue (Kumari et al., 2023).

In a regression model with heteroscedasticity, parameter estimates may be biased. The variance of the error term remains homoscedastic (constant) across all observations, which is one of the assumptions of regression analysis. The Breuch-Pagan test was used to assess whether or not the error variance is constant, implying heteroscedastic data. If the P values are less than 0.05, the null hypothesis of homoscedasticity is rejected, indicating the presence of heteroscedasticity; if the P values are larger than 0.05, the null hypothesis of homoscedasticity is accepted, indicating the absence of heteroscedasticity. Once all statistical assumptions for the data have been satisfied, the hypotheses were tested in line with the study variables to predict profitability of dairy companies in Kenya.

3.9.4 Multicollinearity

Multicollinearity is high correlation between independent variables in a regression model, can distort estimates of regression coefficients and provide inaccurate statistical findings (Shrestha, 2020). Variance Inflation Factor (VIF) values were computed to identify multicollinearity; VIF values more than 10 indicate considerable multicollinearity (Bayman & Dexter, 2021). Addressing multicollinearity may involve removing or combining correlated variables to enhance the model's stability and interpretability.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1Introduction

This chapter presents the analysis of data to examine the effect of working capital management on the profitability of dairy companies in Kenya. Both descriptive and inferential statistics were employed in line with the study objectives. The results are presented using tables and figures, covering accounts receivable management, cash management, and liability financing, as well as the moderating effect of firm age.

4.2 Response Rate

Table 2 highlights the response rate for the study. A total of 40 questionnaires were distributed to the respondents in dairy companies in Kenya and all were returned while filled and valid for analysis. This represented an excellent response rate of 100%.

TABLE 2

Rate of Responses

Parameters	Frequency	Percentage %
Response	40	100%
Non-Response	0	0%
TOTAL	**40**	**100%**

4.3 Demographic Characteristics of the Respondents

4.3.1 Position in the Company

The findings in Table 3 show that 28.6% of the respondents were Sales Managers, 24.8% were Finance Managers, 13.3% were Operations Managers, while 33.3% fell under other positions such as administrative or production roles. This distribution indicates that responses were drawn from diverse managerial categories within the dairy companies, ensuring a balanced representation of perspectives across different operational areas. The inclusion of Finance Managers, who form a significant portion of the respondents, strengthens the study's reliability since they are key informants on matters relating to financial performance.

TABLE 3

Position in the Company

Position	Frequency	Percent
Finance Manager	10	24.8
Operations Manager	5	13.3
Sales Manager	11	28.6
Any Other	14	33.3
Total	**40**	**100.0**

4.3.2 Years of Experience in the Dairy Industry

The results in Table 4 indicate that . This suggests that the majority of respondents possessed substantial experience in the industry, providing credible insights into financial and operational practices within their respective companies.

TABLE 4

Years of Experience

Years of Experience	Frequency	Percent
Less than 1 Year	1	3.0
1-3 Years	13	32.0

4-6 Years	14	36.0
Over 6 Years	12	29.0
Total	**40**	**100.0**

4.3.3 Size of the Company

As shown in Table 5, half (50%) of the respondents were drawn from large dairy companies, 30% from medium-sized dairies, and 20% from mini dairies. This distribution indicates that the study captured responses from firms of varying operational capacities, ensuring a balanced representation of the dairy industry across different scales of production and financial capability.

TABLE 5

Size of the Company

Size of the Company	Frequency	Percent
Mini Diary	8	20.0
Medium Diary	12	30.0
Large Diary	20	50.0
Total	**40**	**100.0**

4.3.4 Average Number of Employees in the Company

As presented in Table 6, the majority of the dairy companies (64.2%) had between 101 and 300 employees, followed by 18.9% with 50–100 employees. About 15% of the firms had over 300 employees, while only 2% had fewer than 50. This distribution suggests that most participating dairy firms were medium to large employers, reflecting a well-established operational capacity within the sector.

TABLE 6

Number of Employees

Number of Employees	Frequency	Percent
Less than 50	1	2.0
50-100	8	18.9
101-300	26	64.2
Over 300	6	15.0
Total	**40**	**100.0**

4.4. Descriptive Statistics

4.4.1 Accounts Receivable Management

The study sought to determine the effect of accounts receivable management on the profitability of dairy companies in Kenya. Descriptive statistics revealed generally high levels of agreement among respondents on various aspects of receivable management, indicating its importance in maintaining liquidity and profitability. This was reflected in the aggregate mean and standard deviation values of 4.34 and 0.62, respectively, signifying that accounts receivable management practices are widely embraced across the dairy companies surveyed. The findings show that the most emphasized practice was assessing customer creditworthiness before extending credit, which recorded the highest mean score of 4.47 (SD = 0.716). This reflects a strong consensus that evaluating customers' ability to pay is essential in minimizing default risk and protecting the firms' cash flow positions. Similarly, the use of modern tools and systems to manage accounts receivable was also highly rated (M = 4.40, SD = 0.709), underscoring efforts by companies to leverage technology in streamlining receivable processes and improving efficiency.

TABLE 7

Descriptive Statistics for Accounts Receivable Management

Aspects of Measurement	**Mean**	**Std. Dev**
We assess customer creditworthiness before extending credit.	4.47	0.716
We have clear and consistently applied credit policies.	4.18	0.675
Our firm regularly follows up on overdue receivables.	4.18	0.781
Our receivables collection period is satisfactory.	4.35	0.622
Late customer payments significantly impact our cash flow.	4.43	0.594
We use modern tools/systems to manage accounts receivable.	4.40	0.709
Aggregate Score	**4.34**	**0.62**

Other critical practices included ensuring that the receivables collection period is satisfactory (M = 4.35, SD = 0.622) and the perception that late customer payments significantly impact cash flow (M = 4.43, SD = 0.594). These findings indicate that while companies are generally successful in collecting receivables on time, late payments remain a notable challenge that directly influences working capital and, ultimately, profitability. The results further showed that companies maintain clear and consistently applied credit policies (M = 4.18, SD = 0.675) and regularly follow up on overdue accounts (M = 4.18, SD = 0.781). These practices point to disciplined credit control measures that ensure receivables are well managed and customer defaults minimized.

The findings demonstrate that dairy companies in Kenya apply strong accounts receivable management practices, with particular emphasis on credit assessment, adoption of modern management systems, and active monitoring of collection periods. These practices contribute to improved liquidity, reduced financial risk, and enhanced profitability. However, the evidence that

late payments still exert significant pressure on cash flows suggests that firms need to strengthen enforcement mechanisms and adopt stricter credit policies to sustain financial performance.

4.4.2 Cash Management

The second objective of the study was to assess the influence of Cash Management on Profitability of Dairy Companies in Kenya. The findings are presented in the table below. Descriptive statistics revealed high levels of agreement among respondents regarding the importance of effective cash management practices in ensuring smooth operations and financial sustainability. This was evidenced by the aggregate mean of 4.20 and a standard deviation of 0.72, showing that cash management is widely practiced and considered vital to profitability within the sector.

TABLE 8

Descriptive Statistics for Accounts Receivable Management

Aspects of Measurement	**Mean**	**Std. Dev**
We maintain optimal cash balances for operations.	4.22	0.862
We prepare regular cash flow forecasts.	4.05	0.597
Surplus cash is invested in short-term instruments.	4.05	0.783
We have policies that reduce idle cash.	4.28	0.716
Efficient cash management improves our operations.	4.33	0.616
We review cash management practices regularly.	4.27	0.751
Aggregate Score	**4.20**	**0.72**

The highest-rated statement was that efficient cash management improves operations, which recorded a mean score of 4.33 (SD = 0.616). This underscores the strong consensus among respondents that disciplined handling of cash flows enhances liquidity and supports operational efficiency, thereby strengthening profitability. Closely following this was the view that firms have policies that reduce idle cash, with a mean of 4.28 (SD = 0.716), indicating that dairy companies strive to minimize non-productive cash holdings and optimize working capital utilization. The

study further found that regular review of cash management practices was rated positively (M = 4.27, SD = 0.751), suggesting that most firms consistently monitor and update their approaches to remain aligned with changing business needs and market conditions. Maintaining optimal cash balances for operations also received strong support (M = 4.22, SD = 0.862), reflecting efforts to strike a balance between liquidity needs and investment opportunities.

In addition, preparing regular cash flow forecasts (M = 4.05, SD = 0.597) and investing surplus cash in short-term instruments (M = 4.05, SD = 0.783) were both moderately rated, pointing to areas where practices are established but could still be strengthened. These findings suggest that while forecasting and short-term investment are recognized as critical aspects of cash management, their implementation varies across firms. Overall, the results indicate that cash management is robustly practiced among dairy companies in Kenya, with strong emphasis on efficiency, policy frameworks, and regular reviews. These practices not only improve liquidity and operational flow but also enhance the profitability of firms. However, moderate scores on cash flow forecasting and investment of surplus funds highlight opportunities for companies to adopt more proactive cash planning and maximize returns on idle resources.

4.4.3 Liability Financing

The third objective of the study was to determine the effect of liability financing on the profitability of dairy companies in Kenya. Results are shown in Table 9 below.

TABLE 9

Descriptive Statistics for Liability Financing

Aspects of Measurement	**Mean**	**Std. Dev**
We use internal sources over external debt for working capital.	4.38	0.807
We rely on short-term financing like overdrafts and trade credit.	4.18	0.594
Financing costs affect our company's profitability.	4.40	0.709
We negotiate favorable credit terms with suppliers.	4.13	0.563
Seasonal changes influence our Liability Financing.	4.20	0.723
Affordable financing helps maintain a stable capital cycle.	4.62	0.586
Aggregate Score	**4.34**	**0.62**

Descriptive statistics revealed a generally high level of agreement among respondents on various aspects of financing practices, underscoring the critical role of financing decisions in sustaining operations and supporting profitability. This was reflected by the aggregate mean of 4.34 and a standard deviation of 0.62, indicating that most firms prioritize prudent financing choices in managing their working capital. The highest-rated statement was that affordable financing helps maintain a stable capital cycle, which recorded a mean of 4.62 (SD = 0.586). This finding highlights a strong consensus that access to cost-effective financing enables dairy companies to stabilize cash flows, reduce financial strain, and improve profitability. Similarly, respondents strongly agreed that financing costs affect company profitability (M = 4.40, SD = 0.709), reflecting the direct impact of interest expenses and borrowing terms on financial performance.

The study also revealed that companies prefer internal sources over external debt in financing their working capital, with a mean of 4.38 (SD = 0.807). This preference demonstrates an inclination toward minimizing reliance on costly external borrowing, thereby safeguarding profitability through reduced financing costs. Seasonal influences were also acknowledged, as the statement "Seasonal changes influence our liability financing" scored a mean of 4.20 (SD = 0.723), pointing to the cyclical nature of dairy production and sales which necessitates flexible financing approaches. In addition, reliance on short-term financing such as overdrafts and trade credit was moderately rated (M = 4.18, SD = 0.594), suggesting that while such facilities are commonly used to bridge liquidity gaps, firms may prefer to limit exposure due to the higher costs or risks associated with short-term debt. Likewise, the practice of negotiating favorable credit terms with suppliers received the lowest score, though still positive (M = 4.13, SD = 0.563), indicating variability in firms' bargaining power and supplier relationships.

Overall, the findings suggest that Liability Financing is a critical determinant of profitability for dairy companies in Kenya. Firms largely emphasize affordable and internal financing sources to maintain efficiency and reduce costs, while short-term debt and supplier credit serve as supplementary strategies to address liquidity pressures. However, the relatively lower rating for negotiating credit terms points to an area where firms could improve their financial strategies to optimize cash cycles and enhance profitability.

4.4.4 Profitability of Dairy Companies

The final focus of the study was to evaluate the profitability of dairy companies in Kenya in relation to their working capital management practices. Descriptive statistics revealed that the sampled firms generally reported strong profitability outcomes, with an aggregate mean of 4.32 and a standard deviation of 0.670. This indicates consistent agreement among respondents that

effective working capital practices encompassing receivable management, cash management, and financing strategies contribute significantly to improved financial performance.

The highest-rated indicator of profitability was that return on assets (ROA) has improved over time, with a mean of 4.50 (SD = 0.716). This reflects the ability of firms to generate higher returns from their asset base, a performance directly influenced by efficient utilization of working capital. Respondents also strongly agreed that working capital management boosts profitability (M = 4.48, SD = 0.554), underscoring the vital role of the independent variables in ensuring adequate liquidity, minimizing financing costs, and enhancing revenue growth.

TABLE 10

Descriptive Statistics for Profitability of Dairy Companies

Aspects of Measurement	**Mean**	**Std. Dev**
Our return on assets (ROA) has improved over time.	4.50	0.716
We maintain a positive net profit margin.	4.07	0.656
Working capital management boosts our profitability.	4.48	0.554
Efficient operations have reduced costs and increased profits.	4.28	0.640
Profits allow for regular reinvestment into the business.	4.27	0.751
Our firm's financial performance is above industry average.	4.30	0.723
Aggregate Score	**4.32**	**0.670**

Further, profitability was reinforced through efficient operations that reduce costs and increase profits (M = 4.28, SD = 0.640) and the ability to reinvest profits into the business (M = 4.27, SD = 0.751). These practices point to a reinforcing cycle where disciplined management of receivables, prudent cash handling, and affordable financing enable firms to generate sustainable profits that fuel future growth. The perception that financial performance is above the industry

average also received a high score (M = 4.30, SD = 0.723), suggesting that companies adopting stronger working capital practices enjoy a competitive advantage over their peers.

Maintaining a positive net profit margin (M = 4.07, SD = 0.656) was moderately rated, suggesting that while firms are profitable, profitability levels remain sensitive to fluctuations in cash flow, financing costs, and collection efficiency. This reinforces the interconnectedness between profitability and the independent variables of the study: firms with stronger accounts receivable management, effective cash practices, and cost-effective financing structures are better positioned to sustain margins.

The findings reveal that profitability of dairy companies is significantly influenced by the effectiveness of working capital management practices. By integrating disciplined receivable management, robust cash handling mechanisms, and affordable financing strategies, firms are able to enhance their returns, reduce operational inefficiencies, and strengthen their competitive positioning in the industry. These results underscore the argument that working capital management is not only central to liquidity maintenance but also a strategic lever for driving superior financial performance in dairy companies.

4.5 Diagnostic Results

4.5.3.3 Collinearity Diagnostics

The collinearity diagnostics indicated that multicollinearity was not a major concern. Most condition indices were below the threshold of 30, with only the fourth dimension slightly above but still within acceptable limits. Variance proportions were also distributed without extreme clustering. This implies that the predictors were sufficiently independent to be analyzed together in the same regression model. The output was as presented in table 11 below.

TABLE 11

Multicollinearity Test

Variable	Tolerance	VIF
Accounts Receivables	0.423	2.364
Cash Management	0.511	1.957
Payables Management	0.389	2.571

This implies that the independent variables were statistically distinct constructs

4.6.1 Test for Normality

The results of the Kolmogorov-Smirnov and Shapiro-Wilk tests (Table 4.27) show that the distribution of profitability scores significantly deviates from normality since both tests returned p-values less than 0.05. This indicates that the residuals are not perfectly normally distributed. However, it is important to note that normality tests are often overly sensitive with small samples, leading to significant results even when deviations are minor. Since regression analysis is fairly robust to moderate departures from normality, especially with a sample size of 40, this deviation is not considered problematic for the validity of the regression results.

TABLE 12

Tests of Normality for Profitability of Dairy Companies

Tests of Normality.

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Profitability	.221	40	.000	.766	40	.000

a. Lilliefors Significance Correction

Visual inspection of the Q–Q plot (Figure 4.1) provides additional evidence to evaluate whether the violation is severe or if the residuals are reasonably close to normal. The Q–Q plot for profitability shows that most of the observed data points lie close to the diagonal line, indicating that the residuals are approximately normally distributed. While some deviations are observed at the tails of the distribution, the general alignment with the diagonal suggests that the normality assumption is reasonably met for the purposes of regression analysis.

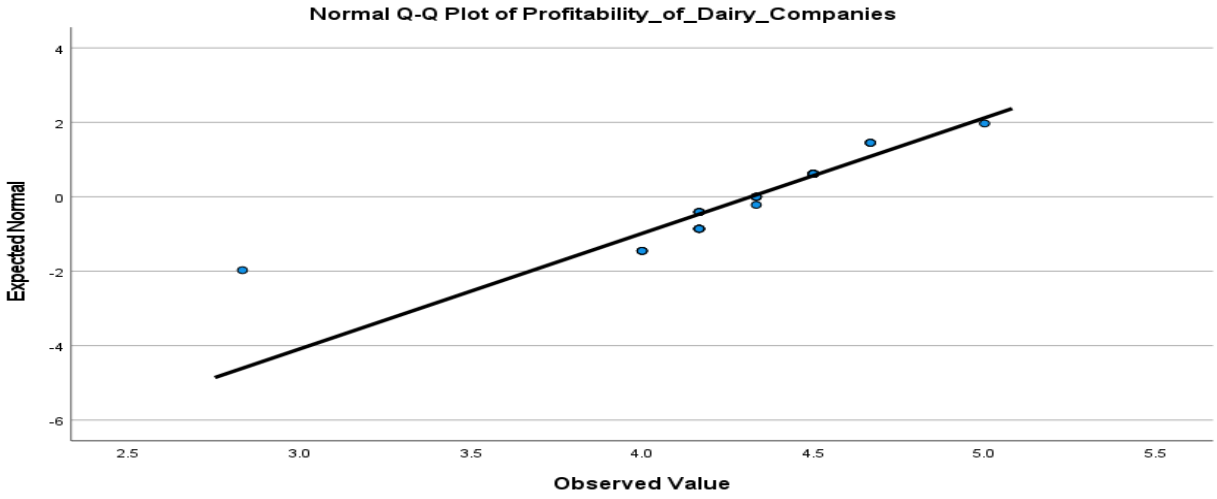

FIGURE 2

Normal Q–Q Plot of Profitability of Dairy Companies

4.6.2 Linearity and Heteroscedasticity

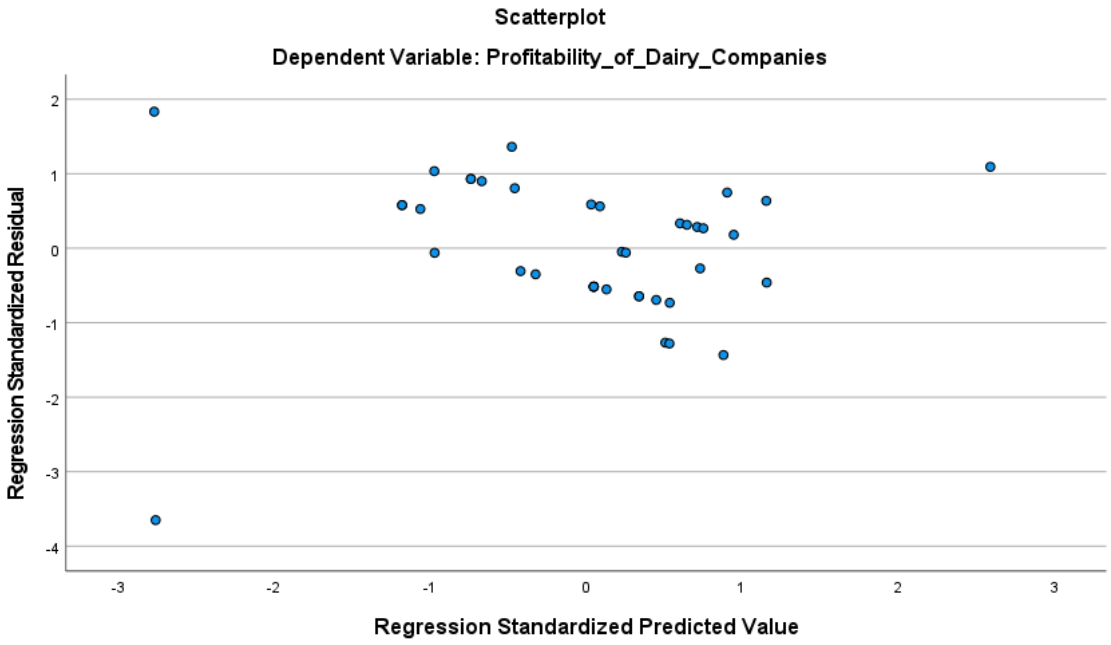

FIGURE 3

Scatterplot of Regression Standardized Residuals against Regression Standardized Predicted Values

The scatterplot of standardized residuals against predicted values (Figure 4.2) shows a random dispersion of points around the zero line, with no clear systematic pattern. This suggests that the assumptions of linearity and homoscedasticity are satisfied. The spread of residuals, ranging roughly from –3 to +2 on the standardized scale, indicates that the model captures both low- and high-profitability firms without strong skewness. Although a few cases appear near the edges, they are not extreme enough to indicate influential outliers. The overall pattern supports the appropriateness of the linear regression model, with no evidence of nonlinear trends or heteroscedasticity.

4.6 Inferential Statistics

4.6.1 Correlation Analysis

The study conducted a Pearson correlation analysis to determine the nature and strength of the relationship between the independent variables (Accounts Receivable Management, Cash Management Practices, and Liability Financing) and the dependent variable (Profitability of Dairy Companies in Kenya). The correlation coefficients, significance values, and sample size are presented in Table 13.

TABLE 13

Correlation Matrix

Variables	Accounts Receivable Management	Cash Management	Payables Management	Profitability
Accounts Receivable Management	1			
Cash Management	.430**	1		
Payables Management	.650**	.340*	1	
Profitability	.780**	.430**	.700**	1

Correlation is significant at the 0.01 level (2-tailed)

Correlation analysis provides preliminary insights into the degree of association between variables before running regression analysis. According to Pallant (2010), correlation coefficients (r) range from –1 to +1, where values close to +1 indicate a strong positive relationship, values close to –1 signify a strong negative relationship, and values around 0 suggest little or no association. The strength of the correlation can further be interpreted as very weak (0.00–0.19), weak (0.20–0.39), moderate (0.40–0.59), strong (0.60–0.79), or very strong (0.80–1.00).

Correlation analysis revealed that all independent variables exhibited positive and statistically significant relationships with profitability among dairy companies in Kenya. This suggests that effective management of working capital components is associated with higher

financial performance. Firms that manage their short-term assets and liabilities efficiently tend to achieve better liquidity positions, smoother cash flows, and improved returns.

Specifically, Accounts Receivable Management showed a strong and significant positive correlation with profitability ($r = 0.780$, $p < 0.01$), indicating that timely collection of receivables enhances firms' cash flows and overall profitability. Dairy companies that regularly assess customer creditworthiness, enforce credit policies, and follow up on overdue accounts experience reduced cash constraints and lower default risks. This enables them to reinvest funds promptly in operations and achieve better financial outcomes. The finding aligns with Deloof (2003) and Afza and Nazir (2018), who reported that efficient receivable management strengthens liquidity and profitability in manufacturing and agribusiness firms.

Cash Management exhibited a moderate and significant positive relationship with profitability ($r = 0.430$, $p < 0.01$). This implies that maintaining optimal cash balances, preparing regular forecasts, and minimizing idle funds contribute to improved financial performance. Effective cash planning allows dairy companies to meet short-term obligations promptly, avoid unnecessary borrowing, and invest surplus cash in profitable short-term instruments. This supports the conclusions of Omesa *et al*. (2013) and Ahmed and Majeed (2019), who found that prudent cash management enhances operational efficiency and profitability among firms in emerging markets.

Payables Management also demonstrated a strong positive and significant correlation with profitability ($r = 0.700$, $p < 0.01$), suggesting that negotiating favorable supplier terms and strategically managing payment periods can enhance firm performance. By taking advantage of credit terms without harming supplier relationships, dairy firms can maintain liquidity while reducing financing costs. These findings are consistent with Sharma and Kumar (2011) and

Lazaridis and Tryfonidis (2006), who found that well-managed accounts payable policies support better cash flow management and profitability in industrial enterprises.

4.6.2 Regression Analysis

The present study was carried out to determine the effect of working capital management on the profitability of dairy companies in Kenya. Guided by the stated objectives, hierarchical regression analysis was used because it allows examination of how different dimensions of working capital management contribute to profitability in successive stages. In the first step, control variables such as firm size and leverage were entered into the model to establish a baseline for profitability. In the second step, specific components of working capital management were introduced to determine their individual and combined effects on profitability. This step helped to identify which aspects of working capital management had the strongest influence on firm performance. In the final step, the moderating variable, firm age, was included to test whether the relationship between working capital management and profitability changes depending on how long a company has been in operation. The hierarchical approach provided a structured way to assess the incremental explanatory power of each set of variables. It also helped to reveal whether older firms benefit differently from working capital practices compared to younger ones. Tables 14-16 show the unmoderated multiple regression outputs.

TABLE 14

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.824	0.680	0.653	0.588	1.536

The model summary provides an overview of how well the independent variables collectively explain variations in the dependent variable, in this case, profitability of dairy companies. The correlation coefficient (R) of 0.824 indicates a strong positive relationship between the set of predictors and profitability. This means that as these aspects of working capital management improve, profitability also tends to increase. The R Square value of 0.680 shows that about 68 percent of the variation in profitability among dairy companies can be explained by the three independent variables included in the model. This is a relatively high explanatory power, suggesting that the model captures the key elements of working capital practices that influence firm performance.

TABLE 15

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	26.396	3	8.799	25.467	0.000
Residual	12.438	36	0.345		
Total	38.833	39			

The ANOVA results show whether the overall regression model actually works in explaining changes in profitability. In simpler terms, it checks if the combination of the three working capital variables—accounts receivable management, cash management, and payables management—collectively makes a meaningful difference in predicting profitability, or if the results could have happened by chance. In this study, the F value of 25.467 and a significance level of less than 0.01 mean that the model is statistically significant. This indicates that, taken together, the three variables explain a substantial portion of the variation in profitability among dairy companies.

TABLE 16

Coefficients

Variable	Unstandardized B	Std. Error	Standardized Beta	t	Sig.
Constant	0.233	0.366	0.067	0.638	0.528
Accounts Receivable Management	0.505	0.123	0.530	4.089	0.000
Cash Management	0.089	0.105	0.089	0.847	0.403
Payables Management	0.331	0.127	0.326	2.614	0.013

The constant value of 0.233 represents the estimated level of profitability when all working capital management practices are absent or at their minimum. Although this value is not statistically significant ($p = 0.528$), it acts as a baseline against which the effects of the independent variables can be compared. In practice, this means that even without strong working capital management, dairy companies may achieve some level of profitability, possibly due to other operational or market factors.

As shown in Table 4.14, Accounts receivable management recorded a beta coefficient of 0.505 with a p-value less than 0.01, indicating a statistically significant and positive relationship with profitability. This implies that when dairy companies improve their receivables management practices by one unit their profitability increases by approximately 0.505 units, assuming other factors remain constant. This finding is consistent with earlier studies by Deloof (2003) and Afza and Nazir (2018), which concluded that firms that collect receivables promptly maintain healthier cash flows and higher profitability. Similarly, it supports the argument by Mathuva (2010) that shorter receivable periods improve liquidity and reduce the need for external financing, enhancing overall firm performance.

Additionally, Cash management showed a beta coefficient of 0.089 and a p-value of 0.403, meaning it has a positive but statistically insignificant relationship with profitability. In practical terms, this suggests that while proper cash management can improve liquidity, its direct effect on profitability among dairy firms may be limited. This result contrasts with findings by Omesa *et al*. (2013) and Ahmed and Majeed (2019), who reported that effective cash planning significantly enhances financial performance. The weaker effect in this study could be attributed to the nature of the dairy industry, where cash flows are often predictable due to regular sales, making cash management less critical compared to credit and payables decisions.

Payables management shows a coefficient of 0.331 with a p-value of 0.013, indicating a statistically significant positive influence on profitability. This means that a one-unit improvement in how dairy companies manage their payables leads to an increase of about 0.331 in profitability. The standardized beta of 0.326 shows it has a strong but slightly smaller effect than accounts receivable management. This finding agrees with research by Sharma and Kumar (2011) and Lazaridis and Tryfonidis (2006), who found that firms extending their payables within optimal limits conserve cash for other productive uses, thereby boosting profits. In the Kenyan dairy context, efficient payables management allows firms to maintain production continuity even under liquidity constraints.

Tables 17, 18 and 19 show the moderated regression outputs.

TABLE 17

Moderated Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
2	0.886	0.786	0.747	0.502	1.250

The R Square value of 0.786 means that about 78.6 percent of the variation in profitability is explained by the combined effect of accounts receivable management, cash management, payables management, and their interactions with firm age.

TABLE 18

Moderated Model ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	30.510	6	5.085	20.162	0.000
Residual	8.323	33	0.252		
Total	38.833	39			

The ANOVA results show that the model is statistically significant ($F = 20.162$, $p < 0.01$). This means that the combined influence of the working capital management practices and firm age significantly predicts profitability. In practical terms, it implies that firm age strengthens the overall model, enhancing its ability to explain variations in financial performance.

TABLE 19

Moderated Model Coefficients

Variable	Unstandardized B	Std. Error	t	Sig.
Constant	0.304	0.325	0.934	0.357
Accounts Receivable Management	0.676	0.338	1.997	0.054
Cash Management	-0.297	0.296	-1.002	0.323
Payables Management	0.262	0.353	0.741	0.464
AR*Age	-0.042	0.062	-0.672	0.506
Cash*Age	0.084	0.053	1.580	0.124
Pay*Age	0.006	0.057	0.113	0.911

The moderated model indicates that when firm age is included as an interaction term, the explanatory power of the model improves substantially (R^2 increases from 0.68 to 0.79). This suggests that older firms may handle working capital differently from younger ones, influencing how working capital practices affect profitability. Accounts receivable management remains a positive predictor (B = 0.676, p = 0.054), though its significance slightly weakens after introducing the moderator. This means that the effect of receivable management on profitability depends somewhat on firm age—older firms might already have established credit control systems, reducing the marginal benefit of further improvements.

Results in Table 4.17 show that Cash management shows a negative but insignificant coefficient (B = -0.297, p = 0.323), suggesting that once firm age is accounted for, cash management alone does not strongly predict profitability. However, its interaction with age (B = 0.084, p = 0.124) indicates a mild positive moderating effect—older firms tend to benefit more from effective cash management than younger ones. On the other hand, Payables management remains positive (B = 0.262, p = 0.464), but its interaction with age (B = 0.006, p = 0.911) is negligible, showing no evidence that firm age alters this relationship.

The moderated regression results suggest that firm age enhances the overall model fit but does not significantly alter the strength of individual relationships. Older firms appear to manage working capital more efficiently overall, but the moderating effect is strongest, though not statistically significant, for cash management. The findings are partly in line with those of Abuzayed (2012) and Mathuva (2010), who found that mature firms tend to optimize cash and receivable management more effectively than younger ones.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter provides a highlight of the summary of study findings, conclusion from the study as well as recommendations based on the study variables. The study sought to determine the effect of accounts receivable management, cash management practices, and working capital on the profitability of dairy companies in Kenya, and further examined the moderating role of firm age on these relationships.

5.2 Summary of Findings

The study findings were organized according to the stated objectives, with the summary designed to highlight the key results that provide a basis for drawing well-grounded conclusions.

5.2.1 Accounts Receivable Management and Profitability

The first objective of the study was to determine the effect of accounts receivable management on the profitability of dairy companies in Kenya. The descriptive findings revealed that receivable management practices are widely embraced across the sector, with respondents strongly emphasizing the importance of assessing customer creditworthiness before extending credit and adopting modern systems to manage receivables. Dairy firms also highlighted the need to monitor receivable collection periods, address the challenges of late payments, and enforce clear credit policies consistently. These practices point to a strong focus on ensuring liquidity, reducing default risk, and maintaining efficient cash flow, all of which are essential to safeguarding profitability.

Despite the generally strong working capital management practices observed among the dairy companies, inferential results revealed that accounts receivable management had a positive but statistically insignificant effect on profitability. Regression analysis indicated that accounts receivable management accounted for about 6.8 percent of the variation in profitability (R^2 = 0.068, $p > 0.05$). This means that although effective receivable management enhances liquidity and operational stability, its independent contribution to profitability is relatively limited in this context.

The finding suggests that receivable management practices on their own may not directly translate into substantial financial gains for dairy companies unless they are complemented by other aspects of financial management, such as efficient cash utilization, cost control, and strategic payables management. It is possible that most dairy firms already maintain standardized credit policies, leaving little variation across firms to influence profitability significantly. This result aligns with the moderated regression outcome, which showed that while receivable management remains positively related to profitability, its statistical significance diminishes when other variables and firm characteristics, such as age, are considered.

These results resonate with prior empirical studies in emerging markets. For instance, Akinlo and Asaolu (2019) found that although accounts receivable management improves liquidity, its impact on profitability is often overshadowed by broader working capital practices and cash flow dynamics. Similarly, Wanjohi and Wambugu (2020) in the Kenyan manufacturing sector observed that receivables management contributed positively to firm stability but was not a standalone determinant of profitability. On the other hand, contrasting evidence exists in more mature markets; for example, Lazaridis and Tryfonidis (2006) in Greece showed a significant

relationship between accounts receivable management and profitability, emphasizing that effective collection policies can directly enhance firm performance.

5.2.2 Cash Management Practices and Profitability

The second objective of the study was to determine the effect of cash management practices on the profitability of dairy companies in Kenya. The descriptive findings revealed that cash management was considered a critical practice for ensuring operational efficiency and financial stability. Respondents highlighted the importance of maintaining sufficient liquidity to meet short-term obligations, adopting systematic approaches to cash budgeting, and ensuring timely monitoring of cash inflows and outflows. Effective cash flow tracking and maintaining adequate reserves were particularly emphasized as essential practices for preventing liquidity crises and supporting the day-to-day operations of the firms.

The inferential results reinforced these insights by showing that cash management practices had a positive and statistically significant effect on profitability. Regression results indicated that cash management practices explained approximately 43 percent of the variation in profitability ($R^2 = 0.430$, $p < 0.05$), confirming a meaningful and positive association between efficient cash handling and firm performance. This finding implies that dairy companies that actively monitor cash inflows and outflows, prepare accurate forecasts, and maintain optimal liquidity levels are better positioned to achieve higher profitability. Effective cash management reduces the risks associated with cash shortages, limits unnecessary borrowing, and ensures that idle funds are invested in productive activities. By improving liquidity and financial flexibility, firms can respond more quickly to operational demands and market opportunities.

These findings are consistent with prior research. For example, Anarfi and Boateng (2019) found that effective cash planning and monitoring significantly enhanced profitability in Ghanaian SMEs, as firms were better able to align liquidity with operational needs. Similarly, Almazari (2014) reported that cash management had a strong and direct impact on profitability among Saudi manufacturing firms, highlighting that firms with disciplined cash flow policies achieved superior returns. In the Kenyan context, Muturi and Wambua (2017) also observed that cash flow monitoring and timely allocation of financial resources were strongly linked to improved firm performance in agribusiness enterprises.

5.2.3 Payables Management

The third objective of the study was to determine the effect of payables management on the profitability of dairy companies in Kenya. The descriptive findings revealed that dairy companies placed significant emphasis on effective liability financing practices to ensure smooth operations and financial stability. Respondents indicated that firms preferred balancing internal financing with short-term external sources such as overdrafts and trade credit to maintain liquidity. Affordable financing options were also seen as crucial for sustaining stable capital cycles, while negotiating favorable credit terms with suppliers was identified as an important practice for optimizing the financing of operations. Seasonal changes were also recognized as factors influencing working capital needs, reflecting the operational realities of the dairy sector.

The inferential results revealed that payables management had a positive but statistically insignificant effect on profitability. Regression analysis indicated that payables management accounted for approximately 7.0 percent of the variation in profitability ($R^2 = 0.070$, $p > 0.05$).

This suggests that while managing trade credit and supplier relationships is beneficial for liquidity control, its independent contribution to profitability among dairy companies is modest.

These findings align with previous studies that have underscored the importance of working capital efficiency for firm performance. For example, Deloof (2003) found that Belgian firms that optimized their receivable and payable cycles recorded higher profitability, emphasizing the value of effective working capital policies. In a study of Nigerian firms, Oladipupo and Okafor (2013) reported that firms with efficient working capital utilization achieved superior financial performance compared to those with poor practices. Closer to the Kenyan context, Makori and Jagongo (2013) established that efficient management of cash conversion cycles among listed firms had a significant impact on profitability, particularly in sectors with high liquidity demands.

5.2.4 Moderating Effect of Firm Age

The moderating effect of firm age examines whether the influence of working capital management practices—accounts receivable, cash, and payables management—on profitability changes depending on how long a firm has been in operation. The moderated regression results showed that introducing firm age and its interaction terms improved the model's explanatory power from 68 percent to 78.6 percent (R^2 increased from 0.680 to 0.786). This means that firm age strengthens the relationship between working capital management and profitability among dairy companies in Kenya. The findings suggest that older firms benefit more from efficient working capital practices than younger firms because of their accumulated experience, stronger supplier networks, and more established financial systems. Specifically, the interaction between cash management and firm age showed a mild positive influence, implying that older firms manage cash flows more effectively, translating into improved profitability. In contrast, the interactions involving accounts receivable

and payables management were weak and statistically insignificant, indicating that the influence of these practices does not change much with firm maturity.

These findings are consistent with earlier studies that have emphasized the role of firm age in financial performance. For instance, Beck, Demirgüç-Kunt, and Maksimovic (2005) noted that older firms generally enjoy better credit access and stronger financial stability, enabling more efficient capital management. Similarly, Berger and Udell (2006) argued that firm age acts as a proxy for reputation and relational capital, which facilitates favorable credit terms and improved supplier relationships. Within the Kenyan context, Mwangi and Murigu (2015) found that older insurance firms demonstrated greater profitability due to accumulated expertise and stable financial practices compared to younger firms.

5.3 Conclusions

5.3.1 Accounts Receivable Management and Profitability

In conclusion, accounts receivable management has only a minimal and statistically insignificant effect on the profitability of dairy companies in Kenya. It can also be concluded that while practices such as credit assessment, monitoring of receivables, and the use of modern management systems are embraced, their contribution to profitability remains weak when considered in isolation. The study further concludes that late payments continue to challenge liquidity management, limiting the overall impact of receivable practices on financial outcomes. Therefore, it can be concluded that accounts receivable management, though important for operational stability, is not a strong independent driver of profitability in the sampled firms.

5.3.2 Cash Management and Profitability

In conclusion, the study revealed that cash management has a positive and statistically significant effect on the profitability of dairy companies in Kenya. It can also be concluded that firms that effectively plan, monitor, and control cash flows are better positioned to maintain financial stability and enhance returns. The study further concludes that practices such as ensuring liquidity to meet short-term obligations and prudent investment of surplus funds directly improve operational efficiency. Finally, it can be concluded that robust cash management frameworks act as a critical foundation for sustaining profitability, shielding firms from financial distress, and enabling growth opportunities.

5.3.3 Payables Management

In conclusion, the study demonstrated that payables management has a moderate but statistically significant effect on the profitability of dairy companies in Kenya. It can also be concluded that firms that efficiently balance current assets and liabilities are more capable of generating higher returns. The study further concludes that effective working capital practices, such as timely receivable collection and optimal cash utilization, enhance liquidity and strengthen financial performance. Therefore, it can be concluded that managing working capital is a critical element in boosting profitability and ensuring long-term financial sustainability in the dairy sector.

5.3.4 Firm Age

In conclusion, the study demonstrated that firm age significantly moderates the relationship between accounts receivable management and profitability of dairy companies in Kenya. It can also be concluded that older firms, with well-established structures and stronger stakeholder relationships, are more capable of translating receivable management practices into higher profitability than younger firms. The study further concludes that maturity provides advantages in

accessing affordable credit, maintaining consistent financial practices, and leveraging trust-based networks to strengthen financial outcomes. Finally, the study concludes that firm age enhances the effectiveness of working capital strategies, positioning older firms at a comparative advantage in sustaining profitability compared to their younger counterparts.

5.4 Recommendations

5.4.1 Study Recommendations

Based on the findings of the study, it is recommended that dairy companies in Kenya strengthen their cash and working capital management frameworks, as these were found to significantly influence profitability. Firms should invest in developing accurate cash flow forecasting systems, timely reconciliations, and prudent liquidity reserves to ensure adequate coverage of short-term obligations. Additionally, companies should adopt structured working capital policies that balance receivables, payables, and inventory management, as these practices directly contribute to profitability. While accounts receivable management had only a weak independent effect, firms should still improve credit control measures, such as stricter enforcement of payment timelines and regular follow-up on overdue accounts, to ease pressure on cash flows. Further, given the moderating role of firm age, younger dairy companies should build robust financial systems early and leverage technology to strengthen receivable and cash management practices in order to overcome limitations in credit access and competitive positioning.

5.4.2 Policy Recommendations

Policymakers, particularly the Ministry of Agriculture and Livestock Development, financial regulators, and cooperative bodies, should design supportive frameworks that enhance financial

management practices within the dairy sector. Incentives could be provided to encourage firms to adopt modern receivable and cash management systems, such as digital payment platforms and integrated accounting tools. Credit institutions should also be encouraged to extend more favorable financing options to younger dairy companies, recognizing their challenges in accessing affordable credit compared to older, established firms. Furthermore, policy guidelines on working capital management, tailored for agribusinesses, could help standardize best practices and reduce inefficiencies across the sector.

5.4.3 Suggestions for Further Studies

Future studies could investigate the role of external economic factors such as inflation, interest rates, and exchange rate fluctuations in shaping the relationship between working capital management and profitability of agribusiness firms. Researchers could also explore sectoral comparisons between dairy firms and other agricultural subsectors to assess whether the moderating role of firm age holds consistently across industries. Additionally, longitudinal studies tracking financial practices over time could provide deeper insights into how maturity and experience influence working capital strategies and profitability sustainability.

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APPENDICES

Appendix I: Introduction Letter

I am carrying out research titled “Effects of Working Capital, firm age and Profitability of Dairy Companies in Kenya.” You have been selected to be a respondent in this study because you are knowledgeable and valued**.** Your identity is safe and the responses you give in this study shall be kept confidential. Do not indicate you name or any other identifying mark on the questionnaire. Your identity will never be revealed to any person without your consent. Feel free to ask questions where you do not understand the question or feel the question is too invasive as per the policy of your work place. *We value your participation.*

Thank you.

Yours Faithfully

Jackline Chelangat Chumo

Appendix II: Research Questionnaire

Section A: Demographic Information

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1. Please indicate your position in the company ☐ Finance Manager ☐ Operations Manager ☐ Sales Manager ☐ Other: _____
2. How many years have you worked in the dairy industry? ☐ Less than 1 year ☐ 1–3 years ☐ 4–6 years ☐ Over 6 years
3. What is the size of your company? ☐ Mini Dairy ☐ Medium Dairy ☐ Large Dairy
4. What is the average number of employees in your company? ☐ Less than 50 ☐ 51–100 ☐ 101–300 ☐ Over 300

Section B: Accounts Receivable Management

No.	**Statement**	**1 – SD**	**2 – D**	**3 – N**	**4 – A**	**5 – SA**
1	We assess customer creditworthiness before extending credit.	☐	☐	☐	☐	☐
2	We have clear and consistently applied credit policies.	☐	☐	☐	☐	☐
3	Our firm regularly follows up on overdue receivables.	☐	☐	☐	☐	☐
4	Our receivables collection period is satisfactory.	☐	☐	☐	☐	☐
5	Late customer payments significantly impact our cash flow.	☐	☐	☐	☐	☐
6	We use modern tools/systems to manage accounts receivable.	☐	☐	☐	☐	☐

Section C: Cash Management Practices

No.	Statement	1 – SD	2 – D	3 – N	4 – A	5 – SA
1	We maintain optimal cash balances for operations.	☐	☐	☐	☐	☐
2	We prepare regular cash flow forecasts.	☐	☐	☐	☐	☐
3	Surplus cash is invested in short-term instruments.	☐	☐	☐	☐	☐
4	We have policies that reduce idle cash.	☐	☐	☐	☐	☐
5	Efficient cash management improves our operations.	☐	☐	☐	☐	☐
6	We review cash management practices regularly.	☐	☐	☐	☐	☐

Section D: Payables Management

No.	Statement	1 – SD	2 – D	3 – N	4 – A	5 – SA
1	We use internal sources over external debt for working capital.	☐	☐	☐	☐	☐
2	We rely on short-term financing like overdrafts and trade credit.	☐	☐	☐	☐	☐
3	Financing costs affect our company's profitability.	☐	☐	☐	☐	☐
4	We negotiate favorable credit terms with suppliers.	☐	☐	☐	☐	☐
5	Seasonal changes influence our Liability Financing .	☐	☐	☐	☐	☐
6	Affordable financing helps maintain a stable capital cycle.	☐	☐	☐	☐	☐

Section E: Profitability of the Dairy Firm

No.	Statement	1 – SD	2 – D	3 – N	4 – A	5 – SA
1	Our return on assets (ROA) has improved over time.	☐	☐	☐	☐	☐
2	We maintain a positive net profit margin.	☐	☐	☐	☐	☐
3	Working capital management boosts our profitability.	☐	☐	☐	☐	☐

4	Efficient operations have reduced costs and increased profits.	☐	☐	☐	☐	☐
5	Profits allow for regular reinvestment into the business.	☐	☐	☐	☐	☐
6	Our firm's financial performance is above industry average.					

Thank you