



ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING AND FINANCE

EXTENSION PROGRAM

**THE EFFECT OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE IN
SMALL AND MEDIUM ENTERPRISES IN DAIRY SECTOR IN ADDIS ABABA USER**

**A THESIS SUBMITTED TO OFFICE OF POST GRADUATE STUDIES OF ADDIS
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THE DEGREE OF MASTER OF SCIENCE IN ACCOUNTING AND FINANCE (MSc)**

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Statement of Declaration

I, the undersigned, declare that the thesis titled "the effect of capital structure on financial performance in small and medium enterprises in the dairy sector in Addis Ababa user" submitted by me for the Master of Science degree in Accounting and Finance at Addis Ababa University is my original work and as it is conducted and presented here it has not prepared and presented for the award of any other degree, diploma, fellowship or other similar title of other university or institution.

Declared By

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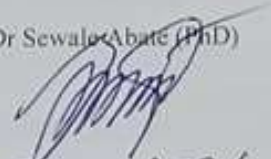
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This is to certify that Mr. Aemiro Mengistu Abebe has carried out his research work on the topic under the title of "the effect of capital structure on financial performance in small and medium enterprises in dairy sector in Addis Ababa user" under my supervision. This work is original in nature and it is suitable for submission for the award of degree for Master of Science in Accounting and Finance.

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Examining Committee Approval

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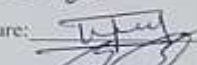
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List of Acronyms

Abbreviation	Full Meaning
ROA	Return on Assets
FSi	Firm Size
LTDTA	Long-Term Debt to Total Assets
SG	Sales Growth
FA	Firm Age
SME	Small and Medium Enterprise
EBIT	Earnings Before Interest and Taxes
VIF	Variance Inflation Factor
FEM	Fixed Effect Model
ASi	Asset Size
Liq	Liquidity

Abstract

This study aims to examine the effect of capital structure decisions on the financial performance on small and medium enterprise in diary sector in Addis Ababa user. The primary objective is to analyze the effect of long-term debt to equity ratio on profitability, as measured by Return on Assets (ROA), while considering other variables such as firm size, asset size, sales growth, firm age, and inflation rate. Using secondary panel data from the audited financial statements of 14 small and medium enterprise in diary sector in Addis Ababa for the period 2015-2024, the study employs regression analysis using Fixed Effect model to investigate these relationships. The findings reveal that capital structure, particularly higher long-term debt to equity ratio also having a statistically significant and negative relationship with return on asset .this is because of the excessive costs associated with debt .additionally asset size and age of firms having statically significant and negative relationships with return on asset. In contrast, some variables, such as firm size and sales growth shows positive effects on performance. Based on these results, the study recommends that financial managers in the small and medium enterprise in diary sector carefully balance their debt and equity financing by reducing their debt to optimize profitability. Additionally, it suggests that firms should consider the specific economic and industry context when making capital structure decisions, as the effects can vary significantly across different environments.

Keywords: *Capital Structure, Financial Performance, Dairy Sector, Profitability, Debt ratio*

Chapter One

Introduction

This chapter provides a brief overview of the effect of capital structure on the financial performance of SME in the dairy sector with the perspective of Addis Ababa user, Ethiopia. It also included the issue description, general and specific objectives, research questions, the study's scope, and its limits.

1.1 Background of the Study

“SMEs are crucial to the majority of economies worldwide, especially those in emerging nations. They account for almost 50% of jobs globally and over 90% of enterprises (World Bank, 2021).” When small and medium-sized firms first appeared in the US in 1782, most non-manufacturing businesses had less than \$7 million in sales annually, and manufacturing businesses employed fewer than 500 people.

The capital structure is one of the most challenging topics in corporate finance literature to comprehend. Barine (2012). The capital structure of a company organization is the sum of its owners' and borrowed funds. Decisions on capital structure are crucial when taking into account the elements that influence a company's success. As a result, choosing a capital structure requires careful consideration. A company's balance sheet provides a complete picture of the company's assets and liabilities (Velnampy and Nireesh, 2012). An organization's capital structure is really a combination of long-term debt, preferred shares, and ordinary shares. When it comes to the ideal capital structure, several factors must be taken into account. Businesses may find it challenging to achieve the objective of using their cash economically when many sources of capital are combined. “Consequently, it increasingly acknowledged a company must arrange its capital structure for optimal fund utilization and to be prepared for future circumstances (Pandy 2009)”. While the foundational Modigliani-Miller theorem established a theoretical benchmark in a world without friction, contemporary analysis emphasizes the significant impact of capital structure decisions in real markets. The trade-off theory, refined by recent scholarship, acknowledges that debt financing offers tax shields and discipline but simultaneously increases bankruptcy risk and agency costs. Empirical studies confirm a non-linear relationship, where moderate leverage can enhance

performance, but excessive debt leads to financial distress costs that erode profitability. Consequently, a firm's operational success and its ability to generate profit are critically influenced by how it strategically balances debt and equity to optimize its capital structure rank, M. Z., & Goyal, V. K. (2021). The motivation for focusing on SMEs stems from the fact that they are the driving force behind prosperity in today's multinational economy.

The capital structure, defined as the mix of a firm's long-term debt and equity financing, is a fundamental corporate finance decision with significant implications for profitability and risk (Myers, 2001). While the seminal work of Modigliani and Miller (1958) proposed irrelevance under perfect markets, subsequent theories such as the Trade-off Theory and Pecking Order Theory acknowledge that financing choices directly impact firm value and performance in real-world conditions characterized by taxes, bankruptcy costs, and information asymmetry (Frank & Goyal, 2008).

SMEs often face unique financing constraints, relying more heavily on internal funds and short-term debt, and having limited access to capital markets compared to large corporations (Beck & Demirgüç-Kunt, 2006). The choice between debt and equity for an SME is not merely a financial calculation but a strategic decision that balances growth potential against the risks of financial distress and loss of owner control (Berger & Udell, 2006). Within the broad spectrum of SMEs, those in the agri-food sector, including dairy processing, encounter amplified challenges. These businesses are often characterized by asset specificity, seasonal cash flows, and exposure to market volatility, which complicate collateral requirements and risk assessments by lenders (Rousseau & Vencappa, 2021). Consequently, dairy SMEs may struggle to optimize their capital structure, potentially operating with sub-optimal levels of leverage that hinder their ability to invest in productivity-enhancing technology and scale operations, thereby affecting profitability (Latruffe, 2010).

The link between capital structure and performance (often measured by Return on Assets - ROA) has been studied extensively in developed economies, empirical evidence from developing regions, particularly Ethiopia, remains scarce. The institutional, economic, and financial market context of Ethiopia characterized by a less developed formal banking sector and unique policy environments may lead to different dynamics in how capital structure decisions affect SME

profitability (Abor, 2007). There is a critical gap in understanding these mechanisms within the specific context of Addis Ababa's dairy SMEs. Therefore, this study aims to empirically investigate the effect of capital structure decisions on the profitability (measured by ROA) of dairy SMEs in Addis Ababa. By doing so, it seeks to contribute context-specific knowledge to the broader capital structure discourse and provide actionable insights for Ethiopian SME owners, financiers, and policymakers.

1.2 Statement of the Problem

Capital structure, defined by a firm's long-term financing mix of debt and equity, is a key strategic driver of financial health and sustainability. Contemporary corporate finance, building on the trade-off theory framework, posits that firms target an optimal structure that balances the tax shield benefits of debt against its potential costs, primarily financial distress and agency conflicts (Strebulaev & Whited, 2012). A structure that approaches this optimum lowers the overall cost of capital, freeing resources for value-creating investments and enhancing performance metrics like Return on Assets (ROA). In contrast, a persistent deviation from this optimum—particularly towards over-leverage—imposes a tangible performance penalty. It can trigger a cascade of negative outcomes: high interest burdens erode profitability, restrictive covenants limit strategic flexibility, and the looming threat of distress discourages investment, ultimately curtailing growth and threatening survival (Oikonomou et al., 2014; Van Bakkum, 2016).

While the strategic importance of capital structure is well-established, SMEs in emerging economies continue to face significant barriers in achieving financing efficiency. Recent literature confirms that these firms often operate with suboptimal capital structures due to systemic constraints (Cull et al., 2018; Casey & O'Toole, 2020). In the context of Addis Ababa's dairy industry, these challenges are intensified by a triple constraint: (1) limited financial literacy among owner-managers, which impedes sophisticated financial planning; (2) severe credit constraints from formal institutions, exacerbated by high collateral demands and information asymmetries; and (3) pervasive informal practices that undermine transparent record-keeping and risk assessment (World Bank, 2019; Fanta & Mutsonziwa, 2021). This environment frequently forces dairy SMEs into precarious financing choices—such as over-reliance on costly short-term trade

credit or excessive owner equity—leading to suppressed profitability, constrained growth, and heightened vulnerability to failure (OECD, 2021; Beck, 2020).

The expansive literature on capital structure reveals a threefold contextual void that this research addresses. The Large-Firm Bias in Foundational Theories: Empirical capital structure research remains disproportionately focused on large, listed corporations in developed markets. Seminal determinants identified by Frank and Goyal (2009) and subsequent cross-country analyses (e.g., De Jong et al., 2011) are derived from this context. While studies in emerging markets (e.g., Abor, 2005; Singh & Bagga, 2019) have adapted these frameworks, they largely perpetuate the large-firm focus, limiting their applicability to SMEs.

The Lack of Sector-Specific SME Analysis: Even within the growing SME finance literature, sector-agnostic studies dominate. General findings on SME financing (e.g., Cowling et al., 2020) often overlook how industry-specific characteristics—such as the perishable nature of inventory, seasonal cash flows, and specific asset structures in dairy processing—fundamentally shape financing options and risks (Rousseau & Vencappa, 2021).

The Ethiopian Scholarly Lacuna: Within Ethiopia, capital structure research has primarily examined regulated financial institutions (e.g., banks, insurance) and large manufacturing firms (Aragaw, 2015; Frezer, 2018). The few studies on smaller enterprises, such as Daniel (2011), neither focus on the dairy sector nor comprehensively model the capital structure-performance relationship. Consequently, a critical gap exists in understanding how dairy SMEs in Addis Ababa navigate their unique financial ecosystem and how their financing choices impact key performance metrics like Return on Assets (ROA). Therefore, this study directly addresses this triad of gaps by conducting a sector-specific analysis of the capital structure-financial performance nexus for dairy SMEs in Addis Ababa, Ethiopia.

1.3 Objective of the Study

1.3.1 General Objective

The general objective of this study will be to examine the effect of capital structure on the financial performance of SMEs in the dairy sector in Addis Ababa.

1.3.2 Specific Objectives

- To analyze the effect of long term debt to total asset on profitability in Small and medium enterprises in dairy sector.
- To examine effect of Asset Tangibility on profitability in Small and medium enterprises in dairy sector.
- To examine effect of firm Size on the financial performance in Small and medium enterprises in dairy sector of Addis Ababa.
- To examine effect of sales growth on the financial performance in Small and medium enterprises in dairy sector of Addis Ababa.
- To examine effect of firm Age on profitability in Small and medium enterprises in dairy sector.
- To examine effect of liquidity ratio on profitability in Small and medium enterprises in dairy sector.

1.4 Research Hypothesis

A research hypothesis is a testable, predictive statement that posits an expected relationship between two or more measurable variables (Bhattacharjee, 2012). It serves as a provisional conjecture, derived from theory or prior empirical evidence, which guides scientific investigation by proposing a tentative explanation for an observable phenomenon. In quantitative research, a well-formulated hypothesis specifically delineates the anticipated relationship between an independent variable (the presumed cause or influencing factor) and a dependent variable (the observed outcome or effect), thereby providing a clear focus for data collection and statistical analysis (Creswell & Creswell, 2018). To empirically investigate the relationship between capital structure and firm performance within the specified context, and guided by the theoretical frameworks and empirical literature reviewed, this study formulates and tests six specific hypotheses. These hypotheses are designed to examine the effect of distinct capital structure components on the profitability of small and medium-sized dairy enterprises in Addis Ababa.

- H1. There is significant and negative relationship between long term debt to asset ratio and profitability of small and medium enterprise in dairy sector.
- H2. There is significant and negative relationship between Asset Tangibility and profitability of small and medium enterprise in dairy sector.
- H3. There is significant and positive relationship between Firm Size and profitability of small and medium enterprise in dairy sector.
- H4. There is significant and positive relationship between Sales Growth and profitability of small and medium enterprise in dairy sector.
- H5. There is significant and negative relationship between Firm Age and profitability of small and medium enterprise in dairy sector.
- H6. There is significant and positive relationship between Liquidity Ratio and profitability of small and medium enterprise in dairy sector.

1.5 Significance of the Study

This research seeks to assist financial managers in better comprehending how capital structure elements affect the financial performance of SMEs. It concentrates on helping them determine the best capital structure by assessing the effects of various levels of debt.

Grasping capital structure choices is vital for investors since it provides key insights into how these choices affect company performance, the consequences of those decisions, and ways to evaluate future firm performance. This study assists the business sector by improving understanding of financial innovations and investment options.

For investors, the performance of a company is crucial for guaranteeing sufficient returns and prompt debt repayment, and the research results can assist in assessing their involvement with SMEs. Management teams gain valuable information on how capital structure choices affect financial performance and the impact of any changes. Academics and scholars will find this study contributes to the existing literature on the determinants of capital structure and its effects on the financial performance of SMEs.

1.6 Limitations of the Study

The study is limited to only the SMEs in located in AA City. Therefore; the finding of this study could not be generalized to all SMEs that were not included in this study. In addition, the researcher was encountered by the lack of databases that consolidated data at one specific place

The analysis spans fiscal years from 2015 to 2024. Due to the unavailability of data for 2025, this study focuses on assessing the financial performance of SMEs up to the year 2024.

1.7 Scope of the Study

Ethiopia has over 40 dairy processing companies, with many classified as SMEs. This study concentrates on SMEs registered with the Addis Ababa City Revenue and Customs Authority. It utilizes audited financial statements from 2015 to 2024 and employs a quantitative data approach,

Like Lame Dairy P.L.C, Family Milk Dairy, Omo Valley Agro Industry P.L.C, Summit Agro Industry P.L.C, Dairy

Development Enterprise, Tasty Dairy Specialities P.L.C, Yekabdi Agro Processing P.L.C, M.B P.L.C, Saba

Baraki Wldeanenia , Bole Dairy Products , Kibur Dairy PLC , Tsehay Dairy , Etete Milk Processing Share

Company and Selam Dairy.

The research examines elements of capital structure, encompassing debt and equity financing, and assesses financial performance through metrics on Return on Assets.

1.8 Organization of the Study

The organization of this paper is divided into five chapters. The first chapter introduces the study, outlining the problem, the research questions, objectives, research hypothesis, significance, limitations, and scope of the research. The second chapter focuses on a detailed review of the relevant and significant literature for the study. Chapter three provides a comprehensive overview of the research methodology, including data collection methods, the analytical approach used, variable measurements, and the anticipated effects of the independent variables on sustainability. Chapter four presents the results and discussion of the findings, and the final chapter concludes the study and offers recommendations.

Chapter Two

Literature Review

2. Introduction

This chapter contains the theoretical and empirical reviews, conceptual framework, and existing research gaps. The empirical review examines earlier research literature from other scholars, whereas the theoretical review focuses on relevant theories related to the subject and the summary of the topics addressed in these sections.

2. 1 Theoretical Literature

This research analyzes a company's capital structure through three primary theories: the Capital Structure Irrelevance Theory proposed “by Modigliani and Miller (1958), the Trade-Off Theory by Modigliani and Miller (1963), and the Pecking Order Theory developed by Myers and Majluf (1984)”. The Stakeholder Theory supports the dependent variable of financial performance, whereas the Free Cash Flow Theory underlies both the mediating and moderating variables.

2.1.1 General Over View of Ethiopian Dairy Sector

Based on “estimates from a 2021 CSA census, Ethiopia boasts the largest livestock population in Africa, comprising over 70.3 million cattle, 42.9 million sheep, 52.5 million goats, and 8.1 million camels. Livestock account for more than 45% of agricultural GDP, 18.7% of national GDP, and 16–19% of foreign exchange earnings, rendering them vital to the nation’s agriculture and daily life (Behnke and Metaferia, 2011). Cattle are the main producers of milk, with camels and goats following, and dairy production largely relies on the native genetic resources of these species (CSA, 2021). Goats and camels (CSA, 2021).”

Varied livestock genetics, favorable agro-ecological conditions, rising local demand, enhanced market access, and proximity to international markets all support the significant growth potential of the dairy sector. Nonetheless, challenges such as low technology adoption, restricted access to resources and services, issues with feed and feeding, along with genetic limitations hinder progress. Examples of systemic barriers include undeveloped marketing, lack of governmental

support, limited funding, weak regulatory frameworks, inadequate infrastructure, major post-harvest losses, and issues related to quality and safety.

The livestock master plan (Shapiro et al., 2015) anticipated that “if planned actions were implemented, national cow milk output would increase by 93% from 2015 to 2020, generating a surplus of 2.5 billion liters.” The typical daily milk production remains low at 1.48 liters per cow and 2.79 liters per camel because these actions have not yet been carried out (CSA, 2021). “Approximately 7.1 billion liters of milk are generated each year from cows and camels, resulting in a per capita consumption of around 60 liters—only one-third of the 200 liters recommended by the WHO. From 1998 to 2020, milk production rose by 1.2% each year, falling short of the 3% yearly increase in population (GRM International BV, 2007). Ethiopia has imported more than 19.43 million liters of milk and cream from 51 nations from 2009 to 2018, resulting in expenses exceeding 2.23 billion Ethiopian birr (Tesfaye et al., 2019).”

In order to address these issues, the Ethiopian government plans to increase the productivity of dairy cows, camels, and goats in order to triple milk production by 2031. The ten-year perspective plan prioritizes the development of the dairy industry by addressing bottlenecks in the areas of genetics, feeding, animal health, marketing, value addition, product quality, and consumer safety. Reducing post-harvest losses and increasing technology adoption are also key components of the strategy. The planning document proposes important interventions across short-, medium-, and long-term horizons from 2022 to 2031 with the goal of transforming the dairy sub-sector. It also describes the implementation framework for the ten-year plan and related initiatives, such as the Ten-in-Ten and Yelemat Tirufat dairy projects.

Figure 2. DAIRY CLUSTERS IN ETHIOPIA. SOURCE: NDAMBI ET AL., 2018

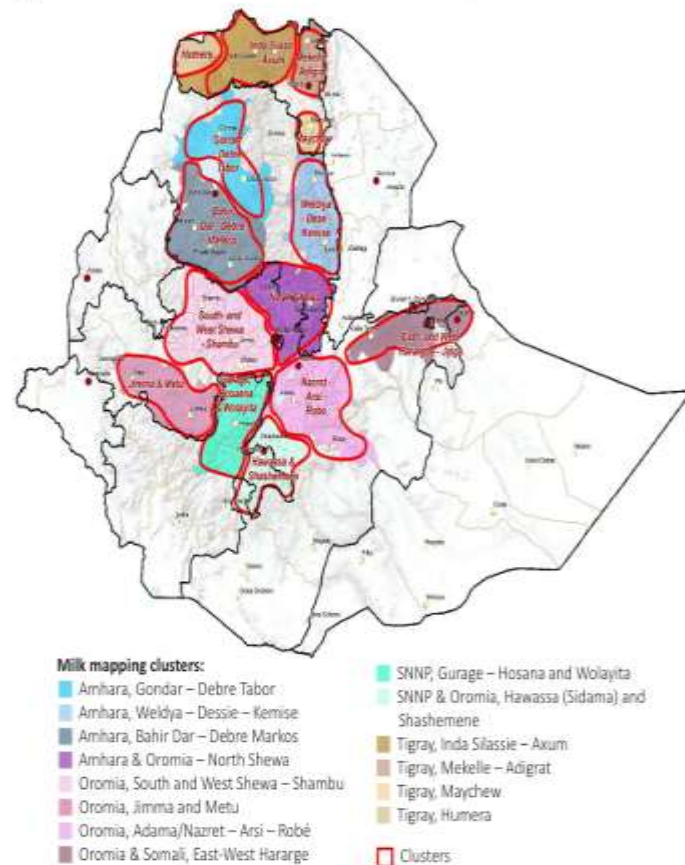


Table 1. RANK AND VOLUME OF MILK PRODUCED UNDER EACH OF THE 14 MAJOR CLUSTERS (MILLION LITRES). SOURCES: NDAMBI ET AL. (2018) AND CENTRAL STATISTICAL AGENCY (2020)

No.	Milk cluster	Annual production volume
1	North Shewa	100.4
2	Adama/ Nazret – Arsi – Robe	447.9
3	South and West Shewa – Shambu	78.3
4	Hawassa (Sidama) and Shashemene	416.4
5	Bahir Dar – Debre Markos	199.6
6	SNRP, Gurage – Hosana and Wolayita	222.8
7	Gondar – Debre Tabor	100.6
8	Inda Silassie – Axum	79.5
9	Mekelle – Adigrat	41.3
10	Humera	37.6
11	Jimma and Metu	176.1
12	East & West Hararge	162.4
13	Weldya – Dessie – Kemise	155.3
14	Maychew	20.8

Figure 2. 1 Dairy Clusters in Ethiopia Source: NDAMBI ETAL,2018

2.1.2 The Modigliani-Miller (MM) Theory

In contemporary terms, The business finance theory begins with the Irrelevance of capital structure proposition by Modigliani and Miller (1958). Prior to their work, no widely recognized theory of capital structure existed. Modigliani and Miller begin with the premise that the company possesses a specific set of anticipated cash flows. When the company selects a specific ratio of debt and equity to fund its assets, it merely allocates the cash flows among its investors. It is presumed that investors and companies have the same Financial market access, enabling DIY leverage. Any leverage can be established by the investor. they desired but was not provided, or the investor can eliminate any leverage the firm assumed but wasn't wanted. Consequently, the company's leverage does not influence its market value.

There are two essentially different kinds of capital structure irrelevance propositions. “The conventional irrelevance theories pertaining to arbitrage create situations where investors' arbitrage guarantees that a firm's value is unaffected by its leverage.” In addition to the initial work by Modigliani and Miller, important contributions also come from works by (Hirshleifer, 1966). According to Miller and Modigliani (1961), the second irrelevance proposition states that "with a firm's investment strategy in place, the dividend distribution it chooses will not influence either the present value of its stock or the overall return to its investors." Put another way, judgments about dividend policy and capital structure are meaningless in perfect markets.

A common justification is to claim that “Although the Modigliani-Miller theorem fails to accurately depict how companies fund their activities, it offers a way to identify why financing could be important.” This explanation offers a plausible understanding of a significant portion of corporate finance theory. As a result, it had an impact on the early development of both the pecking order theory and the trade-off theory. If the perfect market assumptions supporting MM's analysis are correct, the leverage irrelevance theorem of MM is true. But the real world is marked by multiple imperfections like taxes, bankruptcy expenses, agency costs, and information asymmetries; these flaws prompted additional research in the field. In their proposal, they viewed the firm's value as not reliant on its capital structure. This proposal was somewhat akin to that of the net operating income method. They considered a company's worth as a result of anticipated operating earnings divided by the rate of discount suitable for its risk category and demonstrated that the average capital cost within a specific class does not depend on the level of leverage.

According to Proposition II, “while the stock price remains constant, financial leverage increases predicted earnings per share (EPS). This is because a corresponding change in the return that shareholders want balances the change in expected earnings. They concluded that an investment financed by common stock only helps present investors if its return exceeds the capitalization rate in their third proposition, which aimed to further the Theory of Investment. Even in ideal capital markets, owners might profit from having debt in the capital structure when a corporate income tax permits interest to be a deductible expense.”

2.1.3 Pecking Order Theory

Myers and Majluf (1984) proposed the pecking order theory. The theory suggests that companies establish a hierarchy regarding the capital needed to fund their business activities. Owing to insufficient information and a weak connection between prospective investors and companies, the preference will be as follows: debt is favored over equity, retained earnings are preferred to debt, and short-term loans are superior to long-term loans. Myers and Majluf (1984) asserted that to address information asymmetry, companies should not issue new securities but rather utilize retained earnings to finance investment opportunities. This suggests that raising ordinary share capital will be costly because of the increased asymmetric information between outsiders and insiders. To prevent the sale of undervalued assets, firms facing considerable information asymmetry should choose debt. Issuing new common shares is a capital structure scenario that can result in a decline in stock price.

The pecking-order theory is based on “the notion of unequal information between outsiders (investors) and insiders (managers), which helps managers select the best financing option. This theory suggests that sources with reduced asymmetric information attract firms looking for financing, as borrowing expenses increase with this factor. Myers (1984) claims that retained earnings are preferable to debt, whereas debt is more beneficial than equity in adverse selection situations. The ranking was influenced by the adverse selection model, as observed by Myers and Majluf (1984).”

Pecking Order Theory suggests that “bigger companies can accumulate retained earnings, leading to a decreased reliance on debt. Consequently, Pecking Order Theory suggests an inverse correlation between size and debt (López-Gracia, Sogorb Mira 2008). Myers (1984) claims that increased firm size lessens information asymmetry problems between owners/managers and creditors, allowing firms to obtain debt under more favorable terms. Pecking Order Theory suggests that the connection between size and debt can be either positive or negative.” For the purpose of this study, the theory of Pecking Order is crucial as it aims to evaluate the financing performance of SMEs throughout their life cycle. Based on the Pecking Order theory, established firms possess a greater capability to retain and build up earnings; thus, their need for external financing to meet financial requirements will be lower compared to that of younger SMEs. The likelihood of older SMEs accumulating profits over time is considerable, which reduces the need for borrowing among these established businesses.

2.1.4 Trade-Off Theory

Kraus and Litzenberger's (1973) study, “which correctly introduced the tax advantage associated with borrowed financing and financial distress costs into a state preference model, is where this hypothesis originated. According to this idea, choosing how much borrowed money and owners' equity to spend depends mostly on weighing the costs and advantages. Trade-off theory does a good job of balancing the advantages of capital structure against the costs of debt. It discusses the many corporate financing choices available to a company. The notion states that a company typically receives funding from two sources: debt and equity capital.”

Trade-off theory primarily addresses two notions in capital structure: agency and distress costs. Penman (2001). Capital structure Trade-off theory plays an important role in describing how a company's total capital is made up of debt and equity. The idea states that although there are flotation costs, non-bankruptcy expenses, and bankruptcy costs that compose financial distress costs, debt financing provides the benefit of tax on interest. (For instance, labor turnover, adverse credit terms from suppliers, disputes between creditors and owners, etc.). A company increasing its overall value concentrates on this counterbalancing when determining how much to raise from each source since the minimal gain of new long-term funds decreases as it climbs while the minimal expense rises. According to the trade-off hypothesis, the ideal capital mix would arise when the marginal expenses associated with bankruptcy and the tax advantage are balanced. As a result, businesses would favor debt over equity until the risk of bankruptcy became prohibitive.

The trade-off approach, according to Brigham & Ehrhardt (2005), “proposes that the unlevered business value in addition to the cost of side effects resulting from financial hardship and tax shield. For a business that has not been supported by debt or minimal debt financing, the likelihood of bankruptcy is negligible. According to Baxter (2007), a company that uses long-term funds extensively is more likely to have liquidity issues and would thus demand an extra premium to offset the risks. Another suggestion to the companies was that they should avoid utilizing long-term funds to a point where the costs of debt surpass the advantages of the tax shield.” An increase in the expected cost of bankruptcy brought on by an increase in long-term finance may diminish the tax shield advantage. Because businesses evaluate borrowing costs in addition to the benefits of long-term financing, this theory is useful for this research. The cost of borrowing is increased by interest payments and bankruptcy costs. The allowance of interest paid from taxes and the

management's autonomy over the financing's terms and conditions are two benefits of long-term financing.

2.1.4.1 Static Trade-Off Theory

These theory posits companies establish ideal capital arrangements by balancing the expense and income of using credit and owner equity. A key benefit of utilizing debt is the presence of a debt tax shield. One of the drawbacks of borrowing is the expense of possible financial hardship, particularly when the company depends excessively on debt. This creates a compromise between the advantages of tax benefits and the potential downside of increased risk of financial hardship. However, there are additional costs and advantages associated with utilizing debt and equity.

Another significant cost factor includes agency costs, arise from interest conflicts among the various shareholders of the company and due to ex-post asymmetric information (Jensen and Meckling, 1976) and (Jensen, 1986). Thus, integrating The static trade-off hypothesis incorporates agency costs implies that a company establishes capital structure on balancing the tax benefits of debt with the costs associated with financial distress from excessive debt and the agency costs of debt against the agency costs of equity. Numerous additional cost elements have been proposed within the trade-off theory, and it would be excessive to cover them all. Thus, this discussion concludes with the statement that a key estimate the static trade-off theory either companies aim for their financial position; if the current leverage ratio strays from the ideal level, the company will modify its business practices to restore the leverage ratio to the optimal position..

2.1.4.2 The Dynamic Trade-off theory

The function of time is crucial in determining best Capital Structure. In these theory, appropriate allocation of budget choice usually hinges on the business that the firm expects in the upcoming time. Certain companies anticipate disbursing capital in the upcoming time, but others plan to secure funds. Building models that acknowledge the significance of time necessitates detailing the number of factors often overlooked in a one-period model. The roles of expectations and adjustment costs are especially significant. In a dynamic framework, the appropriate financing choice usually relies on the financing margin that the company expects in the upcoming period. Certain companies anticipate disbursing funds in the upcoming period, while others foresee

generating funds. If capital is to be obtained, it could be in the form of debt or equity. In a broader sense, a company engages in a mix of these activities.

A significant precursor to contemporary dynamic trade-off theories was (Stiglitz, 1973), who analyzes the impacts of taxation from a public finance viewpoint. Stiglitz's model does not represent a trade-off theory because he made the significant assumption of eliminating uncertainty. The initial dynamic models that examine the trade-off between tax savings and bankruptcy costs are (Kane et al., 1984) and (Brennan and Schwartz, 1984). Both examined continuous-time models incorporating uncertainty, taxes, and bankruptcy costs, excluding transaction costs. As companies respond instantly to negative shocks by adjusting without costs, they sustain elevated debt levels to benefit from tax savings.

Dynamic trade-off models may also consider the option values involved in postponing leverage choices to the subsequent period. (Goldstein et al., 2001) note that a company with minimal leverage currently has the future choice to raise leverage. According to their assumptions, the possibility of increasing leverage later helps to lower the otherwise ideal level of leverage at present. (Strebulaev, 2007) assessed a framework that closely resembles the one proposed by (Fischer et al., 1989) and (Goldstein et al., 2001). If companies finance optimally only at intervals due to transaction costs, then the debt ratios of many firms would often differ from the ideal. In the model, the company's leverage reacts less to short-term equity variations and more to long-term value shifts.

Some concepts are quite broad in dynamic models. The best financial decision now relies on what is anticipated to be advantageous in the forthcoming period. In the upcoming period, it might be best to gather funds or to distribute them. When seeking new funds, it may be best to obtain them as debt or as equity. In every instance, what is anticipated to be best in the upcoming period would assist in defining the pertinent comparison for the company in the present period. A significant portion of the research on dynamic trade-off models is relatively new, therefore any assessments of their findings should be somewhat cautious. This research has already significantly changed our comprehension of mean reversion, the function of profits, the importance of retained earnings, and path dependence. Consequently, the trade-off category of models seems to be significantly more promising than it was only a few years back.

2.1.5 Agency Theory

The theory was formulated by Jensen and Meckling (1976). The emphasis is on the behavioral relationship between the owners (principals) and the other parties (agents) whom the owners hire to perform tasks on behalf of the principal. The agency theory emphasizes the view that the interests of shareholders are not prioritized by the managers. Jensen and Meckling (1976) elaborate on this idea by identifying two primary conflicts among parties in a company: first, shareholders conflict with owners, and second, owners conflict with creditors. In the first scenario, managers are motivated to chase the firms' profits they manage for their personal benefit at the expense of the shareholders. In that situation, debt gives shareholders the incentive to invest less than optimally.

Managers might steer clear of high levels of leverage if they feel that it jeopardizes their positions and earnings. On the other hand, shareholders can distribute specific risks of the company and favor more hazardous projects. Neilson (2004) argues that management may endorse a project with a positive net present value, with the benefits primarily accruing to bondholders. Smith and Warner (2009) argue that claim dilution and asset substitution can lead to increased agency conflicts between shareholders and bondholders. Corporate and financing policy decisions can create incentives for various claimants that will reduce value-diminishing behavior and thus decrease agency expenses.

Comba (2013) argues that greater dependence on debt financing can assist companies in reducing their agency costs. The need for funding via owners' equity decreases along with associated agency expenses. However, a company's ability to increasingly rely on long-term financing is limited due to high agency costs arising from the potential for the business to experience financial difficulties. Moreover, apart from financial distress costs, existing shareholders may face dilution due to claims from additional debt holders, leading to a demand for higher returns that are reflected in the firm's elevated cost of capital. This theory is crucial for this study as the selection of dividends, leverage, and management ownership can reduce agency costs arising from the firm's contractual relationships. SME managers can increase their ownership share in the company and align their interests with those of the shareholders, resulting in a convergence of interests between managers and shareholders. Even with an increase in the firm's equity stake, management reduces the diversification of personal portfolios.

2.1.6 The Signaling Theory

These arises from the information imbalances between company management and shareholders. If managers think their companies are undervalued, they would prioritize issuing debt and consider equity as a final option. On the other hand, if management thinks their company is overvalued, they would prioritize issuing equity. There was initially introduced by (Ross, 1977), who argues that if managers possess inside information, their decisions regarding capital structure would convey information to the market. Leverage could be affected by the theoretical assumption that rising debt indicates managers' optimism regarding future profits. Debt agreements involve a promise by managers to fulfill upcoming interest obligations. Not repaying debt may result in bankruptcy. This demonstrates to the market that the company would generate enough cash flows to cover its debt obligations.

The investors of a firm are the ultimate recipients of the company's cash flows. This is due to the fact that promised interest payments are a liability and take precedence over dividends. Consequently, stock prices react more strongly to announcements regarding financial structure than bond prices. When managers are positive about their company's future, the company's stock price seems to be more undervalued compared to bond prices.

Recognizing the discrepancy between trade-off theory and the actual pecking order of financing, Myers and Majluf (1984) introduced a new theory known as signaling or asymmetric information theory of capital structure. They showed that under asymmetric information, equity offerings are typically viewed as negative news because managers are inclined to issue stocks when the shares are overvalued. (Russ's, 1977) the model indicates that a firm's worth would increase with LEV as higher leverage enhances the market's view of value. Asquith and (Mullins, 1983), (Masulis and Korwar, 1986), and (Mikkelson and Partch, 1986) similarly found through empirical observations that announcements regarding new equity offerings lead to significant drops in stock prices. This is a significant reason that equity problems are relatively uncommon in large, established companies. Debt significantly contributes to enabling investors to gather information that is valuable for overseeing management and making effective operational decisions (Harris and Raviv, 1990).

The signaling theory suggests that corporate managers would seek to schedule equity offerings according to the market's evaluation of their stocks. For instance, (Baker and Wurgler, 2002) 1) indicate a significant connection between corporate financing choices and past market valuations of equity. Essentially, the capital structure of a company is the aggregate outcome of previous efforts by corporate managers to time the market. Nonetheless, (Brounen et al., 2006) find no evidence indicating that European managers convey their private information to affect capital structure.

2.1.7 Profitability Theories

The trade-off theory suggests that profitable companies ought to have greater leverage to counterbalance corporate taxes (Ross, 1977). (Fama and French, 2002) and others, conversely, discovered a negative correlation between profits and leverage. (Myers, 1984) proposed that management adheres to a hierarchy of preferences regarding financing. His research suggests that the expenses associated with issuing risky debt or equity surpass the factors that define optimal leverage in the trade-off model; this leads to the pecking order. He further contended that the trade-off theory does not accurately forecast the extensive cross-sectional and temporal variations in observed debt ratios. The pecking order theory primarily offers a behavioral rationale for why some firms choose their specific financing methods. It aligns with certain logical arguments, including asymmetric information and signaling mentioned earlier, along with flotation expenses. Additionally, it aligns with the finding that the most successful firms in a sector usually possess the lowest levels of debt. The pecking order theory clarifies why most external funding is derived from debt and why more profitable companies tend to borrow less, not due to a low. The following is the sequence that was followed:-

- ✓ Internal financing is preferred by businesses
- ✓ If external financing is needed, the safest security is offered first. They start with debt, look at convertible bonds and other hybrid securities, and then consider equity as a last resort.

Pecking Order Theory works well for big businesses that make a lot of money and have sufficient internal cash from depreciation and retained earnings. These businesses strive for a certain dividend payment ratio and follow a stringent dividend policy. According to this thesis, very profitable businesses would rather borrow money than issue shares when they needed outside funding.

The free cash flow hypothesis is another idea developed in this regard. This idea is designed for established businesses that have a tendency to overinvest. It claims that when a company's operational cash flow greatly outpaces its viable investment prospects, large debt levels will boost value notwithstanding the risk of financial crisis (Myers, 2001). In spite of the possibility of financial difficulties, the company's ability to make profits raises its worth. Businesses that have positive free cash flow use this cash flow to reduce their debt ratio. In order to compensate for the absence of internal capital, companies with negative free cash flow raise their debt ratio. Companies with relatively high debt have a lower percentage adjustment than those with relatively low debt.

2.2 Overview of capital structure and component of capital structure

2.2.1 Overview of capital structure decisions

“The various methods a company uses to finance its assets are referred to as its capital structure (Mudugu, 2013)”. A company may choose to use debt, equity, or other financial instruments in varying amounts or combinations. Modigliani and Miller's (M&M) introduction, which is regarded as the turning point for contemporary corporate finance theory, laid the groundwork for theories and research on the topic of capital structure. The theory sheds light on how a company would choose its capital structure in a capital market devoid of transaction costs, taxes, and other obstacles.

Capital structure denotes the various methods a company employs to finance its assets (Mudugu, 2013). A company can choose various levels or combinations of debt, equity, or other financial instruments. The basis for theories and research surrounding capital structure originated with the work of Modigliani and Miller (M&M), which is viewed as the pivotal moment for contemporary corporate finance theory. The theory offers understanding of a company's capital structure choices in a capital market devoid of taxes, transaction expenses, and other frictions.

Numerous hypotheses, such as the pecking order theory, agency theory, and trade-off theory, aim to clarify capital structure by incorporating frictions overlooked in Modigliani and Miller's (1958) analysis that the initial Modigliani and Miller model neglects. Myers (2001) states that no universal

theory exists for the debt-equity decision, and there's no reason to anticipate one. Nonetheless, multiple valuable theories have been identified previously, each aiding in the comprehension of the debt-equity framework that companies select; two types of hypotheses can be differentiated. Either they forecast the presence of an ideal debt-equity ratio for every firm (known as static tradeoff theory models) or they assert that there are no clear target capital structures (pecking order hypothesis).

The majority of theories, such as the trade-off theory, agency theory, and pecking order theory, have attempted to explain capital structure by incorporating frictions that were overlooked in Modigliani and Miller's (1958) work and that the original Modigliani and Miller framework overlooks. Myers (2001) asserts that there is neither a general explanation of the debt-equity option nor any reason to anticipate one. Nonetheless, as was previously said, there are a number of helpful ideas that each aid in comprehending the debt-to-equity structure that businesses select. Two types of hypotheses may be separated. They either state that there are no clearly defined goal capital structures (pecking order hypothesis) or anticipate the presence of an ideal debt-to-equity ratio for every company (so-called static tradeoff theory models).

According to static tradeoff models, the ideal capital structure is reached when the marginal present value of the cost of financial distress on extra debt equals the marginal present value of the tax shield on additional debt. The pecking order theory, on the other hand, contends that there are no ideal capital structures; instead, businesses choose between internal financing (retained earnings) and external funds based on a variety of factors, including the perceived degree of information asymmetry in the financial environment. For instance, Salawle (2007) notes that the main elements affecting a firm's capital structures include ownership structure and managerial control, growth, profitability, issuance costs, and tax difficulties related to debt.

The balance sheet's equity and liability sides display the many sources that contribute to a business's capital structure. Huang and Vu Thi (2003) state that a business has three fundamental funding sources, sometimes referred to as capital components. First, they may utilize retained earnings (internal equity) to finance new investment possibilities; second, they can issue additional shares (external equity); and third, but certainly not least, they can borrow money through debt instruments (debt capital). These funding sources make up a company's capital structure and also represent its ownership structure.

Nothing is more crucial for a new firm, according to Brigham and Daves (2004), “than raising capital, which is the means of obtaining funds that have a significant influence on the enterprise's performance.” This reasoning may apply to any firm, not only new ones. The balance of debt and equity in a company's capital structure is determined by a number of factors, including the firm's characteristics, the state of the economy, and the management' goals and beliefs. According to Karadeniz, Kander, Balcilar, and Onal (2009), management's top goal is to weigh the advantages and disadvantages of using both debt and equity.

2.2.2 Equity financing

Sibilkov (2009) contends that "equity enables the organization to generate funds without incurring debt." This suggests that the funds obtained via equity do not require repayment at a particular time. The shareholder who purchases stock in the firm expects to regain their investment through future profits. The shareholders have the right to obtain the company's earnings via dividends or possible future capital appreciation. In the event of company losses, shareholders have limited liability, meaning their financial risk is restricted to the amount they invested in the company.”

According to Joseph (2011), “equity has these characteristics. Equity provides a remaining return; the firm pays shareholders once it has fulfilled its responsibilities to other creditors. In cases of bankruptcy or liquidation, shareholders are the final group to recover their investments. The firm is not required to pay dividends, and the funds invested by shareholders lack a defined schedule for repayment. Two categories of equity exist: internal equity and external equity (Myers, 1984). Internal equity refers to the retained earnings of a firm that form part of the company's distributable reserves when calculating the distributable profit figure in the income statement. The firm needs to decide what portion of that profit will be allocated as dividends to common shareholders; the remaining sum represents retained earnings, which will be incorporated into the company's reserves on the balance sheet. The retained earnings therefore indicate the total that is reinvested back into the business. External equity involves obtaining external funds through the issuance of new shares. When internal equity (retained earnings) is inadequate for a necessary investment opportunity, a company must pursue external equity (Graham and Harvey, 2001).”

Narayanan (2008) asserts that “raising too much capital through equity offerings might indicate to the market that a company has insufficient cash flow reserves, which could result in the stock being

undervalued.” When external equity is utilized for investments, the stock prices of the firms may sometimes decline. As a result, it is beneficial to create reserves to guarantee that a larger share of capital requirements can be met internally.”

2.2.3 Debt Financing

Debt financing or financial leverage involves utilizing debt to support operations and obtain additional capital to boost the expected return on equity. It is determined by dividing total liabilities by total assets or total liabilities by the combined total of debt and equity. According to Joseph (2011), “a financial responsibility has the following characteristics. A contract dictates it, in which the company and the creditor set repayment schedules for principal and interest, guaranteeing the creditor receives payment irrespective of the firm's profits, with the creditor given priority for payment over dividends or net income distributions. Creditors insist on collateral, usually based on physical assets.” Another necessity is to have consignors to guarantee the debt repayment.

Highly leveraged companies are those that utilize a greater proportion of debt compared to equity. Among the various types of debt financing, long-term debt is typically regarded as the safest option since the company has years, if not decades, to repay the principal while paying interest. As stated by Nawaz et al. (2011), only the temporary Debenture capital, part of the borrowed capital within a capital structure, is retained by the creditors of the company. Various types of debentures are issued to benefit investors. When a company opts for debt financing in its operations, it encounters financial risk and is known as a levered firm. Ehrhardt & Brigham (2011) defined financial risk as the extra risk imposed on common stockholders by opting to use debt financing. Financial risk refers to the likelihood that a company's profits will fall short of expectations due to its financing approach. Additionally, financial risk arises from the obligation to fulfill fixed financing commitments linked to debt, often in the form of interest payments, prior to shareholders being able to utilize retained earnings. The acceptable level of debt (financial leverage) in one industry may pose significant risks in another, meaning that fixed cost financial leverage often heightens cash flow unpredictability and, as a result, influences net income, especially during periods of declining operating income. Thus, leverage heightens the firm's risk of insolvency or encountering financial challenges. Financial risk is an extra risk imposed on common stockholders due to the choice of financing with debt. Financing risk emerges because debt includes a fixed obligation, typically as interest, that must be fulfilled when it becomes due

before shareholders can benefit from the retained earnings (Brigham, E. F., & Houston, J. F., 2007).

2.2.4 Cost of capital

The corporate cost of capital is the anticipated return on a portfolio that includes all of the business's outstanding debt and equity securities. Since it reflects the opportunity cost of capital for investing in all of the company's assets, it is the appropriate discount rate for average-risk initiatives. If the firm has no outstanding debt, the corporate cost of capital is only the expected rate of return on its shares. Companies can influence the cost of capital in a number of ways due to the choice of financial structure (Wald, 1999). It was also observed that owners were in a riskier position than those who supplied debt because investors who provided equity capital were the residual claimants of a company's net cash flows.

Debt and equity are the two halves of capital, according to Bader (2018). When a business uses debt to fund its operations, it borrows money from a lender for a certain amount of time and agrees to repay the money plus interest. Interest on the loan is paid to the lender in return. With equity financing, shareholders purchase business stock, become owners, and earn a percentage of the company's profits. The many expenses associated with the various funding sources that organizations have access to are often represented as the cost of capital.

2.2.5 Financial performance

Financial performance is the strength of an organization's financial condition. It is determined by how much better the shareholder is at the conclusion of a time frame. Because it gauges a company's capacity to turn a profit, the profitability ratio is crucial for evaluating its financial success. This is the business's total effectiveness and performance. Therefore, businesses need to understand that attracting investors starts with profitability (Dao, 2016). The success of the financial performance in relation to the investment is determined by the quantity of net income. The primary goal and guarantee of the company's long-term sustainability is business profitability. Therefore, it is crucial for businesses to assess past and present profitability as well as forecast future profitability (Khan and Safiudin, 2016). These achievements can also be used to evaluate similar businesses in the same industry. Clear financial performance analysis can occasionally be

utilized to ascertain shareholder values using financial measures and market data (Zeitun & Titan, 2007).

2.2.6 Measure of financial performance

The most important measurement of financial performance of a company is ratio i.e. asset profitability is also known as the company's earning power, total resources devoted to operations, or return on total investment. (1978 Murthy). According to Block and Hire (1978) —The income statement is the major device or measuring the financial performance of a firm over a period of time. Other activities like rising of additional finance, further expansion, problem of bonus and dividend payments rest upon this measurement. It can be measured for a short term and long term. Profitability provides overall performance of a company and useful tool for forecasting measurement of a company's performance. The overall Objective of a business is to earn a satisfactory return on the funds invested in its operations. Profitability ratios serve as a gauge of a company's general effectiveness. It is frequently applied as a gauge of the company's earnings over a given time period based on its level of sales, assets, capital employed, net worth, and earnings per share. The firm's earning potential is measured by its profitability ratios, which are viewed as a sign of its expansion, success, and management. Accordingly, the term 'profitability' is a relative measure where profit is expressed as a ratio, generally as a percentage. (Rajkot, 1984. P-61).

The definition of performance according to Indra Bastian (2006) is a description of the achievement of implementation/programs/policies in realizing the goals, objectives, mission, and vision of an organization. According to Hery (2018) Measurement of financial performance is a formal attempt to evaluate the efficiency and effectiveness of a company in generating certain profits and cash positions. With this financial performance measurement, it can be seen the prospects for growth and financial development of the company from relying on the resources it has. Meanwhile, according to Fahmi (2018), financial performance is an analysis carried out to see how far a company has carried out using the rules of financial implementation properly and correctly. Based on the above understanding, it can be concluded that financial performance is a description of the financial condition of a company that is analyzed with financial analysis tools so that the excellent and bad financial situation of a company, which represents work performance over a specific time period, can be known. This is crucial to ensure that resources are used as effectively as possible in addressing environmental changes. Performance appraisal is one

way that can be done by management to fulfill its obligations to funders and also to achieve the goals set by the company. Financial Performance Measurement Performance measurement is used by companies to make improvements to their operational activities to compete with other companies. A company's financial performance is examined critically through the process of financial performance analysis, which also includes calculating, measuring, evaluating, and proposing remedies. Several analytical tools can be used to evaluate financial performance. Jumingan (2006: 242) shows different financial analysis techniques to measure financial performance. the first one is comparative analysis of financial statements is an analytical technique by comparing the financial statements of two or more periods by showing changes, both in total (absolute) and in percentage (relative). The second one is trend analysis (positional tendency), is an analysis technique to find out the tendency of financial conditions to show an increase or decrease. Percentage analysis per component (common size), is an analytical technique to determine the percentage of investment in each asset to the total or total assets and debt. The third is analysis of Sources and Use of Working Capital is an analytical technique to determine the number of sources and use of working capital through two compared periods. The fourth one is analysis of the Sources and Uses of Cash is an analytical technique to find out the condition of cash along with the reasons for changes in cash over a certain period. The fifth is financial Ratio Analysis is a financial analysis technique to determine the relationship between certain items in the balance sheet and income statement both individually and simultaneously. The six one is analysis of Changes in Gross Profit is an analytical technique to find out the position of profits and the causes of changes in profits. The last one is Break Even Analysis, is an analytical technique to determine the level of sales that must be achieved so that the company does not experience losses.

Generally Revenues are generated by the efficient use of a company's resources. Decisions made regarding business development, managerial control, and asset acquisition will be guided by the analysis of financial performance. Performance evaluation also reflects a company's monetary achievements over time. Comparing similar firms in the same industry can also be done based on such achievements. Financial ratios and market data can be used to determine shareholders values from time to time through clear financial performance analysis (Zeitun, & Tian, 2007).

2.3. Empirical Literature

As was previously mentioned, the Modigliani and Miller study from 1958 marked the beginning of significant worldwide research on the capital structure. As of right now, they said that a company does not need to be supported by debt or equity capital. This is commonly referred to as the capital structure irrelevance theory. A few years later, MM (1963) pointed out that a company should finance entirely through debt if it deducts debt interest before arriving at taxable profits. Since then, a large number of empirical studies have been conducted on this topic, expressing varying and contradictory opinions about what determines the ideal capital structure and how it affects firm performance. As a result, these studies at the worldwide and regional/national levels are covered in the following sections.

2.3.1 Empirical reviews studied in foreign countries

The key paper in (Rajan and Zingales, 1995) titled says, “What is our understanding of capital structure?” Certain proof from global statistics. The study examined the factors influencing capital structure selection by evaluating the funding choices of publicly traded companies in leading industrialized nations. At a collective level, company leverage was observed to be alike throughout G-7 nations. The writers examine the institutional variations among the seven nations and pinpoint the key factors influencing capital structure. Additionally, they discovered that companies in the UK had a reduced amount of debt compared to the other six nations. They contend that while general firm-specific elements greatly impact the capital structure of businesses worldwide, numerous country-specific factors are also crucial. They also discovered that firm profitability had a negative correlation with leverage, meaning that as a firm's profitability increased, its leverage decreased.

Additional studies comparing firms from emerging and developed countries produced comparable results regarding the importance of location factors. For instance, (Maksimovic, 1999) and (Joseph P.H. Fan, 2012) examine the leverage levels of firms in both advanced and emerging economies. They found that elements within the institutional environment in different countries account for differences in capital structure, especially the ratio of LTD/LA. Firms in developed countries possess more long-term debt, with a larger portion of their overall debt classified as long-term, and larger firms maintain a higher ratio of LTD relative to their total assets and debt. They think that differences in leverage across countries can be explained by variations in legal systems and financial institutions, along with industry characteristics and macroeconomic elements, including

inflation rates and economic growth rates. (Harry Huizinga, 2007) suggests that by including international taxation elements, corporate debt policy not only mirrors domestic corporate tax rates but also variations in international tax structures, as multinational companies are motivated to allocate debt to countries with high tax rates.

Hajar et al. (2023) research seeks to assess and examine: “the impact of capital structures (Debt Equity Ratio and Fixed Asset Ratio) on the Return on Assets in manufacturing firms within the Food and Beverage sub-sector listed on the Indonesia Stock Exchange. The researcher utilizes historical data collected from 2016 to 2020. The information used in this study includes secondary data, and the research sample is made up of 20 companies chosen via purposive sampling. Data analysis utilizes regression techniques on panel data.”

Abiodun (2014) employs “a triangulation approach to assess the relationship between capital structure and the financial performance of companies in Nigeria. The researcher collects information from 31 manufacturing firms that possess audited financial reports for the years 1999 and 2012. The article identified a notable curvilinear relationship between ROA and leverage, which is also referred to as the debt-to-equity ratio. The claim in the paper that larger companies generally maintain superior performance than mid-sized firms with a similar debt ratio has been disproven.”

A study conducted by Endri, E. et al (2021) “examined forty-two publicly listed mining companies on the Indonesian stock exchange. To evaluate the capital structure, DER, DAR, LDTE, LDTC, and growth function as independent variables. DER had a favorable yet negligible effect on ROA and EPS, while DAR had a significant positive impact on ROE; LDTC significantly and positively affected both ROA and EPS. ROE and EPS saw a small favorable effect from LDTC. ROE and EPS were notably influenced, whereas ROA stayed mostly unchanged. Concerning ROA, ROE, and EPS, growth has a significantly positive impact.”

San and Heng (2011) explore “the connection between a company's capital structure and its performance before and after the 2007 financial crisis. This study investigates construction firms in Bursa Malaysia from 2005 to 2008. The 49 construction firms are classified into large, medium, and small categories according to their paid-up capital. In large firms, a negative relationship exists between EPS and debt to capital, while a positive relationship is found between return on capital

and long-term debt to capital.” At the same time, just the Operating Margin related to Long-term Debt to Common Equity indicates a positive correlation in mid-sized companies, whereas EPS linked to Debt to Capital shows a negative correlation in smaller firms. In conclusion, the results suggest a relationship between capital structure and corporate performance as assessed by certain indicators.

Mohammad et al. (2012) seeks to “expand on the research of Abor (2005) and Gill et al. (2011) concerning the influence of capital structure on profitability by examining how capital structure impacts the profitability of industrial companies listed on the Amman Stock Exchange during a six-year period (2004-2009). The findings indicated a significant inverse correlation between debt and profitability, derived from correlations and multiple regression analysis. This finding was supported by pertinent research carried out by Winston Pontoh (2013), Koech (2013), Singh (2013), and Opoku et al. (2014).” The prior research used debt equity and debt asset ratios as measures of capital structure across 247 firms from 2009 to 2011, with growth, size, tangibility, and operating leverage degree functioning as its determinants. This research employed route analysis to find that size had a negative significance on DAR, DOL had a negative significance on DER, DAR had a negative significance on ROA, and DER had a negative significance on ROE.

Skopljak and Luo's (2012) study looks at “the financial structure and business performance of Australian Authorized Deposit-Taking Institutions. The findings show a significant relationship between Australian Authorized Deposit Taking Institutions' performance and their capital structure.”

2.3.2 Empirical review from Ethiopia

While there is a growing body of research on capital structure in Ethiopia, most studies focus on large corporations, financial institutions, or specific manufacturing sectors, leaving a significant gap concerning Small and Medium Enterprises (SMEs), particularly in agri-business sectors such as dairy Processing.

Telila, M. (2018) used an “explanatory study design and a quantitative research technique to evaluate the impact of capital structure on the financial performance of Addis Ababa's construction enterprises. The study was conducted using secondary data from sixteen grade one general construction businesses' financial statements. The information came from both individual

businesses and the ERCA big taxpayer branch office. Short-term debt had a favorable and statistically significant impact on the financial performance of GCI enterprises in Addis Ababa, according to the findings of a balanced panel regression model utilizing OLS regression analysis. The financial performance of GCI enterprises in Addis Ababa was positively and statistically significantly impacted by firm size, while the financial performance was positively and significantly impacted by asset tangibility.”

A research by Melese, A. (2013) evaluated how capital structure affected Ethiopia's engineering and metal industries' financial performance. Secondary data from yearly financial reports from 2007 to 2012 was used in the study. Using six years' worth of data from ten chosen businesses out of a population of 78, panel data analysis was used. Although the long-term debt ratio was found to be negligible, the results demonstrated a beneficial impact of capital structure variables (debt ratio, short-term debt ratio, and long-term debt ratio) on the financial performance of the Ethiopian metal and engineering business. Beyond just acknowledging the benefits of debt, the study suggested that businesses in Ethiopia's engineering and metal sectors ascertain their ideal capital structure.

Aragie et al. (2015) evaluate the connection between Ethiopian commercial banks' financial performance and capital structure. utilizes secondary panel data gathered from eight sample commercial banks' annual reports over the years 2000–2012. In their research, total debt to total asset and total debt to total equity were utilized as capital structure variables, while firm size was also included as a control variable. Return on asset, return on equity, and net profit margin were employed as dependent factors to gauge financial performance. The results indicate that, as evaluated by return on equity, leverage has a beneficial impact on Ethiopian commercial banks' financial performance. The experts recommend that the capital structure of Ethiopia's banking sector be optimized.

In the instance of Ethiopian breweries, Endale, T. (2015) “evaluated the relationship between working capital management and company performance. The study made use of secondary data sources from the audited financial accounts of two Ethiopian-registered breweries. Regression models of cross-sectional and time series data were analyzed using both correlation analysis and pooled panel data estimation equations. According to a study's findings, there is a statistically insignificant negative correlation between the businesses' profitability and the inventory

conversion duration, daily sales outstanding, and daily payments outstanding. The study came to the conclusion that working capital management did not significantly affect the profitability of Ethiopian breweries.”

Using information from Ethiopian manufacturing companies, Tufa, F. B. (2016) also attempts to examine how corporate capital structure affects profitability. The researcher used quantitative study design techniques, and secondary data was gathered by reviewing yearly financial reports for the years 2010–2014 and merging cross-sectional and time series data. 34 samples were chosen at random from the study's population, which consisted of big taxpayer manufacturing share firms. The results demonstrate a strong positive correlation between profitability (ROCE) and capital structure variables (short-term liabilities to total liabilities ratio, long-term debt capitalization ratio, and interest coverage ratio). According to the study, manufacturing organizations may increase their profitability by implementing an appropriate capital structure mix, and short-term debt is more positively correlated with financial success than long-term debt.

Tariku (2016) researched “the effects of capital structure on company profitability, revealing that explanatory variables like total debt ratio, growth, size, and liquidity are significant at or below the 10% significance level, while tangibility and non-debt tax shields are considered insignificant.”

Multiple research efforts have investigated capital structure in major companies and financial industries. For example, discovering varied outcomes that endorsed both pecking order and trade-off theories. In a similar vein, Gebreyes (2018) and Adugna (2017) “concentrated on commercial banks, whereas Frezer (2018) examined insurance firms. In the manufacturing industry, Frezewd (2016) examined large manufacturing companies and discovered a positive correlation between short-term debt and profitability, aligning with pecking order theory. Asrat (2016) investigated cement firms and found a positive relationship between capital structure and return on assets, whereas a negative relationship was noted with return on equity. Tufa (2016) examined major manufacturing companies and observed that short-term debt had a positive impact on profitability.”

Some research has addressed smaller businesses or particular industries, but not focused on dairy SMEs specifically. Daniel (2011) examined “small-scale manufacturing cooperatives, offering insights into funding obstacles but lacking detailed sector analysis. Telila (2018) analyzed a

construction firm in AA and discovered that STD and interest coverage enhanced performance, whereas elevated debt-equity ratios adversely influenced it. Endale (2015) examined breweries, determining that the management of working capital had a minimal impact on profitability.”But none of these studies directly focus on the dairy industry or the distinct capital structure difficulties encountered by dairy SMEs in Addis Ababa. The dairy sector features unique operational cycles, perishable products, seasonal demand patterns, and particular asset configurations (e.g., cold chain systems) that set it apart from manufacturing, construction, or banking. Additionally, SMEs in this sector frequently encounter greater informality, restricted collateral, and diminished access to formal credit—elements not entirely reflected in research on larger, more established companies.

Hence, although current Ethiopian literature provides useful perspectives on capital structure dynamics in different settings, it lacks evidence-based recommendations for dairy SMEs. This study seeks to fill that gap by focusing explicitly on how capital structure decisions influence the financial performance of SMEs in the dairy processing sector in Addis Ababa.

2.4 Conclusions and Knowledge Gap

The contemporary evolved after the release of the capital structure irrelevance model by Modigliani and Miller in 1958. They contended that a company could not alter the value of its existing securities by adjusting the ratios of its capital structure. Modigliani and Miller determined that in a tax-free environment, the firm's value and its total capital costs were not affected by its capital structure decisions. A subsequent analysis, building on the 1963 examination by Modigliani and Miller, determined that including corporate taxes raises the firm's market value and lowers the overall cost of capital to the extent that interest becomes tax-deductible. The studies were carried out based on various assumptions that aligned with the specific circumstances. Trade-off theory, pecking-order theory, agency theory, signaling theory, and dynamic trade-off theories provide empirical evidence that challenges the capital structure research by Modigliani and Miller. The numerous studies conducted on capital structure have not yet solved the issue of achieving an optimal capital structure for companies, particularly for small and medium enterprises. Numerous empirical studies examined in this chapter have uncovered the differing opinions of researchers regarding the influence of capital structure on profitability. In Ethiopia, to the best of the researcher’s knowledge, only a limited number of studies have been done on the effects of capital

structure, mainly focusing on the banking sector, while the researcher has paid little attention to SMEs in the dairy industry.

This research will deliver contextual evidence by investigating the relationship among capital structure elements long term debt to equity ratio, firm size, firm age, asset size, sales growth and liquidity with financial performance metrics on return on asset of dairy SMEs in Addis Ababa, providing sector-specific insights for an important yet under-researched industry in Ethiopia. Practical Advice: Actionable recommendations for small and medium enterprise owners/managers to improve their financing strategy. Policy Importance: Information to aid financial entities and policymakers in developing customized assistance frameworks for agricultural business SMEs.

2.5 Conceptual Framework of the study

The primary objective of the study is to analyze the impact of capital structure on the profitability of SMEs in the Dairy Sector within Addis Ababa City. A conceptual framework is developed to connect capital structure with firm profitability, facilitating the examination of data on how the effects of SME capital structure affect firm performance, which acts as the dependent variable. The conceptual framework presented below depicts independent variables such as the long term debt to equity ratio, firm size, firm age, asset size, sales growth and liquidity serves as the dependent variable.

Independent Variables

- Long-Term Debt / Total Equity Ratio

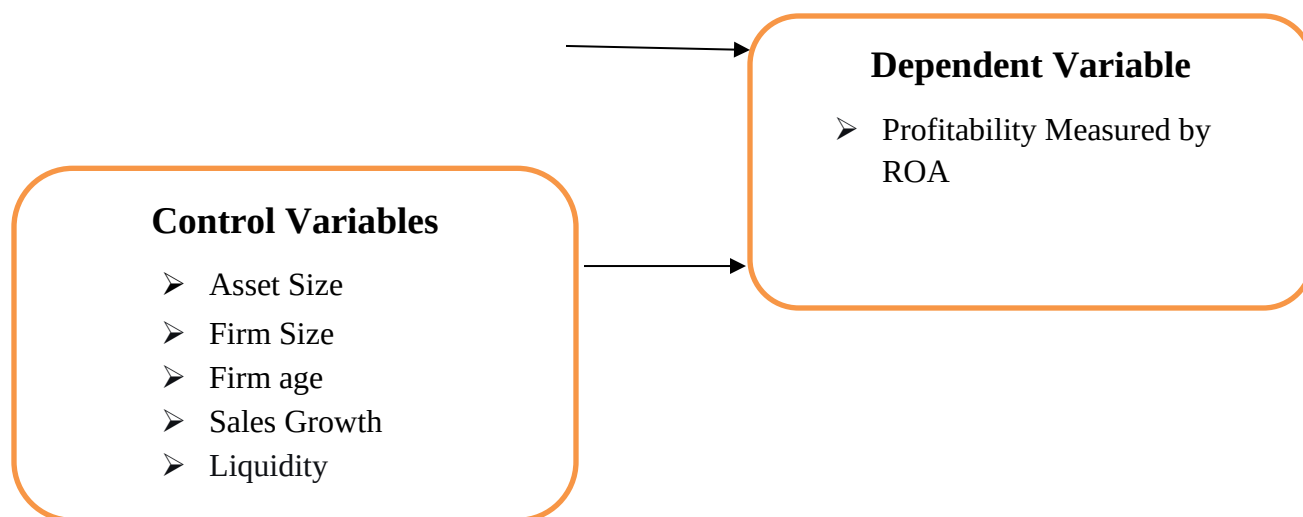


Figure 2. 2 Conceptual Framework of the Study

Chapter Three

Research Design and Methodology

3.1 Research Design

According to Adams et al. (2007), a research design serves as a guide for achieving research goals and providing answers to research questions. To put it another way, it was a master plan that included the precise techniques and steps for gathering and evaluating the necessary data. It also had to guarantee that the data gathered was suitable for resolving an issue. In order to accomplish their goals, the researcher had to have a thorough grasp of the information sources and devise strategies based on sampling procedures. The study made use of secondary quantitative data and panel data. This study used an explanatory research design in order to accomplish the goals mentioned in the previous section, taking into account the nature of the research topic and the research viewpoints.

3.2 Research Approach

Based on the principles outlined by Creswell (2003), this study employed a quantitative research approach, as its primary objective is to identify causal factors specifically, the influence of capital structure on financial performance outcomes. This approach is characterized by the use of instruments to measure quantifiable variables, the collection of numerical data to test stated hypotheses, and the analysis of information through statistical procedures. These methodological choices align with the post-positivist paradigm, wherein knowledge is developed through the careful observation and measurement of an objective reality.

Following the scientific method accepted within post-positivism, the research process began with established theoretical frameworks concerning capital structure and performance. Data representing the numerical values of key variables such as debt ratios, firm size, firm age, liquidity, sales growth and financial performance metrics (e.g., Return on Assets) were then collected from audited financial statements. This empirical data was rigorously analyzed to either support or refute the theoretical propositions, allowing for verification and necessary refinement of understanding. Consequently, the quantitative methodology was deemed the most appropriate to examine the effects of capital structure on the performance of the selected dairy processing small and medium in Addis Ababa.

3.3 Population and Sampling

3.3.1. Target Population

The target population for this study comprises all small and medium enterprises in the dairy processing sector that are registered and operational in Addis Ababa. According to records from the Ethiopian Ministry of Trade and Industry there are approximately 820 small and medium enterprises registered in Addis Ababa across all sectors. From this broader population, the dairy processing sub-sector was specifically targeted. The study focuses on small and medium enterprises that have been in operation for at least ten years (2015–2024) and possess complete, audited financial statements for that period, ensuring data reliability and consistency for panel analysis.

3.3.2. Sampling Technique

A purposive (judgmental) sampling technique was employed to select the final sample of dairy small and medium enterprises. This non-probability method was chosen due to the stringent data requirements of the study specifically, the need for ten consecutive years of audited financial statements, which are not uniformly available among Ethiopian small and medium enterprises. The selection criteria included:

- Small and medium enterprises classified within the dairy processing sector.
- Operational continuity from 2015 to 2024.
- Availability of complete and audited financial reports.
- Registration within Addis Ababa.

From the identified population, 14 dairy SMEs met all criteria and were included in the study. This purposive approach ensured the sample was fully information and methodologically appropriate for conducting a rigorous panel data regression analysis, despite limiting generalizability to the broader small and medium enterprises population.

3.4 Sample Size

The accessible population for this study comprised all dairy processing SMEs registered with the Addis Ababa City Revenue and Customs Authority. From the Ministry of Trade, Industry, and Cooperatives records, There are total number of registered SMEs in Ethiopia was 12,751 of which 820 were located in the Addis Ababa City. The SMEs had been classified according to the major sectors in the economy by the Ministry of Trade and Industry. From the population of registered

SMEs in Addis Ababa, 14 dairy processing SMEs were identified and selected for the study based on the following criteria: ^{Lame Dairy P.L.C, Family Milk Dairy, Omo Valley Agro Industry P.L.C, Summit Agro Industry P.L.C, Dairy Development Enterprise, Tasty Dairy Specialities P.L.C, Yekabdi Agro Processing P.L.C, M.B P.L.C, Saba Baraki W/deanenia , (Bole Dairy Products , Kibur Dairy PLC , Tsehay Dairy , Etete Milk Processing Share Company and Selam Dairy} This sample yielded a balanced panel dataset of 140 firm-year observations (14 firms × 10 years), which is considered adequate for panel data regression analysis (Hsiao, 2014).

3.5 Method of Data Collection

This study employed a secondary data collection approach, drawing exclusively from audited financial statements and annual reports of the selected dairy processing small and medium

enterprise in Addis Ababa. According to Cooper and Schindler (2006), secondary data provides a reliable and objective basis for empirical analysis, particularly in financial performance research, as it minimizes respondent bias and ensures consistency in measurement. The secondary data were sourced from: Audited annual financial reports (balance sheets, income statements, cash flow statements) for each small and medium enterprise from 2015 to 2024, Annual reports submitted to the Addis Ababa City Revenue and Customs Authority, Company publications and archival records where available. These documents provided the necessary quantitative data for all study variables, including measures of capital structure and financial performance indicators. The use of secondary data ensured accuracy, verifiability, and comparability across firms and years, which is essential for panel data regression analysis (Saunders et al., 2019).

3.6 Data Analysis

3.6.1 Method of Data Analysis

Information obtained from the initial survey was gathered, organized, modified, and categorized to assess the extent of the correlation of cause and effect relationships among the variables. Descriptive statistics, correlation, and regression analyses would be performed on the data using Stata version 12 software.

- Descriptive statistics are frequently employed to characterize variables. Descriptive statistics involve examining a single variable individually (Univariate analysis). Every researcher conducts these descriptive statistics prior to initiating any form of data analysis. Descriptive statistics were employed to assess the normality of the gathered data. Calculations of central tendency such as mean and standard deviation were conducted to determine if they align with the research hypothesis. The average is determined by summing the study data and dividing that total by the number of data points. The mode represents the value that appears most frequently in the dataset. The median represents the central value in a collection of data. The value is determined by initially arranging the data in ascending order and then finding the middle value in the sequence. When handling an odd set of data, the median represents the central value. Consequently, this study will utilize mean, median, and standard deviation.
- Correlation is a statistical metric that shows the degree to which two or more variables vary together. Correlation is a statistical method that demonstrates if and how strongly two variables are connected. A positive correlation shows how much those variables rise or fall together; a

negative correlation shows how much one variable rises while the other falls. When the variation of one variable consistently indicates a comparable variation in another variable, there is frequently an inclination to believe that the alteration in one leads to the alteration in the other. Nonetheless, correlation does not indicate causation. An unidentified element could affect both variables in a similar way. Inferential statistics would be employed to derive conclusions from the data related to the regression model. Analysis of correlation will be employed to examine the study's hypothesis

- Regression analysis is a widely used statistical technique for examining relationships between variables, often described in terms of cause and effect. It is particularly useful for estimating and controlling for confounding factors. A regression model proposes a functional relationship between variables, and parameter estimates are used to formulate a predictive equation. Various diagnostic tests are then conducted to assess the model's validity and reliability. For panel data which combines cross-sectional and time-series dimensions uses Fixed Effects (FE) model because the unique errors are correlated with the regressors, to analyze the relationship between capital structure and financial performance. This equation illustrates the fixed effect regression models:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \dots + \beta_k X_{kit} + u_i + \varepsilon_{it}$$

Where:

- ✓ Y_{it} = dependent variable (ROA) for firm i in year t
- ✓ X_{kit} = independent and control variables for firm i in year t
- ✓ u_i = firm-specific unobserved effect (fixed)
- ✓ ε_{it} = idiosyncratic error term

3.6.2 Model Specification and Selection

To assess the impact of capital structure on the financial performance of SMEs in the dairy industry in Addis Ababa, a multiple linear regression model can be utilized. This will enable you to evaluate how various capital structure factors impact profitability (which usually signifies financial performance and is commonly assessed by Return on Assets [ROA]). The independent (explanatory) variables signify various indicators of capital structure:

- Long-term Debt to Total Assets Ratio (LTDTA)
- Asset Size (ASi)
- Firm Size (FSi)
- Firm Age (FA)
- Sales Growth (SG)
- Liquidity (Liq)

General Regression Model

$$ROA_{it} = \beta_0 + \beta_1 LTDTA_{it} + \beta_2 ASi_{it} + \beta_3 FSi_{it} + \beta_4 FA_{it} + \beta_5 SG_{it} + \beta_6 Liq_{it} + \alpha_i + \epsilon_{it}$$

Where:

- **ROA_{it}** : Return on Assets for firm i in year t
- **$LTDTA_{it}$** : Long-Term Debt to Total Assets ratio for firm i in year t
- **ASi_{it}** : Asset Size (Tangibility) for firm i in year t
- **FSi_{it}** : Firm Size for firm i in year t
- **FA_{it}** : Firm Age for firm i in year t
- **SG_{it}** : Interest Coverage Ratio for firm i in year t
- **Liq_{it}** : Equity to Total Assets ratio for firm i in year t
- **α_i** : Firm-specific fixed effect (captures time-invariant unobserved heterogeneity)
- **ϵ_{it}** : Idiosyncratic error term
- $i=1,2,\dots,14$ firms
- $t=2014,2015,\dots,2024$ (years)

3.7 Study Variables

3.7.1 Dependent variables

Return on assets

The Return on Assets (ROA) indicates how effectively a business utilizes its assets to generate profit prior to tax and dividend payments. It serves as a measure of how efficiently management uses the resources at its disposal (Bodie, Kane, & Marcus, 2009). A higher ROA suggests that a

company is generating profits effectively and reflects operational efficiency in asset utilization, which is a crucial aspect of overall firm performance (Gibson, 2013). The return on assets ratio measures the profitability derived from a company's asset base over a given period, serving as a key metric for assessing how efficiently assets are deployed to create earnings (Bodie et al., 2009). The return on assets ratio is calculated by dividing net income by the average total assets.

$$ROA_{it} = \frac{\text{Net Income}_{it}}{\text{Average Total Cost}_{it}}$$

3.7.2 Independent Variables

Long term debt to Total Asset ratio

- The Long-Term Debt to Total Assets Ratio (LTDTA) measures the proportion of a firm's total assets financed by long-term debt defined as debt obligations due beyond one accounting period (Abor, 2005). This ratio reflects the extent to which a company relies on long-term borrowings to fund its asset base and is a key indicator of financial leverage and long-term solvency (Abeywardhana, 2015). A higher LTDTA indicates greater reliance on long-term debt financing, which may increase financial risk due to fixed interest obligations and potential covenants (Mutaju, 2014) and A lower LTDTA suggests a more conservative capital structure with greater reliance on equity or short-term funding (Hasan et al., 2014).

$$LTDTA_{it} = \frac{\text{Long term Liabilities}_{it}}{\text{Total Asset}_{it}}$$

3.7.3 Control Variables (Covariates)

According to the current literature, common control variables that affect the profitability of small and medium enterprises include Asset Size (SZ), Firm Size, and the Sales growth rate.

- Asset size (AS_i) pertains to the fundamental assets that provide worth to a company's investment or loan. The asset size is not constant; instead, it increases or decreases based on market dynamics. Lenders utilize tangible assets as collateral to facilitate loan applications for capital structure (Abey 2015). Tangible assets can serve as collateral, affecting a firm's

ability to secure debt. Higher tangibility may reduce financing costs but may also indicate less flexibility (Singh, 2013; Aragaw, 2015). The value will be Negative or positive depending on leverage and sector (Aragaw, 2015; Frezewd, 2016).

$$AS_{it} = \frac{Total\ Assets_{it}}{Fixed\ Assets_{it}} .$$

- Firm Size (FSi) is a critical determinant of financial performance, as larger firms often benefit from economies of scale, better access to finance, and greater market power (Abor, 2005; Mulualem, 2011).

$$SIZE_{it} = \ln(Total\ Assets_{it})$$

- Firm Age (FA) Firm age captures the effect of experience, market establishment, and learning over time. Older firms may have more stable operations and better access to resources, though they might also face inefficiencies (Abor, 2005).

$$FA_{it} = Current\ Year - Year\ of\ Establishment$$

- Sales Growth (SG) reflects a firm's ability to expand its market share and revenue, which is often linked to higher profitability and improved financial performance (Frezewd, 2016).

$$SGR_{it} = \frac{Sales_{it} - Sales_{i,t-1}}{Sales_{i,t-1}}$$

- Liquidity (Liq) measures a firm's ability to meet short-term obligations. Adequate liquidity supports operational continuity and reduces financial distress risk (Asrat, 2016).

$$Liq_{it} = \frac{Current\ Assets_{it}}{Current\ Liabilities_{it}} i$$

CHAPTER FOUR

DATA PRESENTATION, DISCUSSION AND ANALYSIS

4.1 Introduction

This chapter presents the empirical findings of the study examining the effect of capital structure on the financial performance of Small and Medium Enterprises (SMEs) in the dairy sector in Addis

Ababa. The analysis focuses on the relationship between the independent variables Long-Term Debt to Total Assets (LTDTA), Firm Size, Firm Age, Asset Size, Sales Growth, and Liquidity and the dependent variable, Return on Assets (ROA). The chapter is structured into four main sections: descriptive statistics, correlation analysis, diagnostic tests for regression assumptions, and regression results with hypothesis testing. The findings are interpreted in light of the study's objectives and theoretical framework.

4.2 Descriptive Statistics

Descriptive statistics provide a summary of the central tendency, variability, and distribution of the study variables. The analysis is based on 140 firm-year observations from 14 dairy SMEs over the period 2015–2024.

- ✓ ROA measures how efficiently a firm uses its assets to generate profit. An average ROA of 6.5% indicates moderate profitability across the sampled dairy SMEs. The standard deviation of 0.092 reflects considerable variation in performance among firms. The range from -15% to +28% shows that: Some firms operated at a loss (negative ROA), likely due to operational inefficiencies, high costs, or market challenges and Others achieved strong profitability, possibly due to better management, market positioning, or economies of scale. This dispersion suggests that not all dairy SMEs perform equally, and factors such as management quality, access to finance, and market conditions significantly influence profitability.
- ✓ Long-term (LTDTA) indicates the proportion of a firm's assets financed by long-term debt. The average of 21.8% suggests that, on average, dairy SMEs rely moderately on long-term borrowing. However, the standard deviation of 0.165 and the wide range (0% to 60%) reveal diverse financing strategies: Some firms operate with no long-term debt, possibly relying on equity, short-term debt, or retained earnings and Others use significant long-term debt (up to 60%), which may indicate aggressive growth strategies, capital investments, or limited equity financing options. High LTDTA can lead to higher financial risk due to fixed interest obligations, while low LTDTA may reflect conservative financing or limited access to long-term credit.
- ✓ Firm Size is measured as the natural logarithm of total assets to normalize the data and reduce skewness. The mean value of 16.45 corresponds to a mix of small and medium-sized enterprises.

The standard deviation of 1.22 indicates moderate variation in firm size across the sample. The range from 14.2 to 19.1 in logarithmic terms translates to substantial differences in actual asset values, reflecting diversity in Production capacity, Market presence and resource availability.

- ✓ Firm Age represents the number of years since establishment. The average age of 12.4 years indicates that most firms are established but not overly mature. The standard deviation of 5.8 years shows variability in operational experience.
- ✓ Asset Size is measured as the natural logarithm of fixed assets, representing the scale of tangible, long-term resources such as machinery, equipment, and property. The average value of 18.2 indicates a moderate asset base. The standard deviation of 1.45 and range from 15.0 to 21.5 suggest: Some firms operate with limited fixed assets, possibly relying on leased equipment or lighter infrastructure and others have substantial fixed investments, which may support higher production capacity but also entail higher depreciation and maintenance costs.
- ✓ Sales Growth measures the annual percentage change in revenue. The average growth rate of 9.8% suggests that, on average, dairy SMEs are expanding. However, the high standard deviation (0.152) and negative minimum (-25%) indicate, Some firms experienced declining sales, possibly due to market competition, demand fluctuations, or operational issues and Others achieved rapid growth (up to 48%), reflecting successful market penetration, product innovation, or effective marketing strategies. Volatility in sales growth is common in SMEs, especially in sectors like dairy, which may be affected by seasonal demand, price volatility, and supply chain disruptions.
- ✓ Liquidity is measured by the current ratio (current assets / current liabilities). The average of 1.85 suggests that, on average, firms have adequate short-term solvency, with current assets nearly twice current liabilities. However, the standard deviation of 0.78 and minimum value of 0.50 reveal. Some firms face liquidity challenges (ratio < 1), indicating potential difficulty in meeting short-term obligations and others maintain strong liquidity positions (ratio > 3), which may reflect conservative working capital management or excess idle resources. A very high liquidity ratio may also suggest inefficiency in asset utilization, while a low ratio signals financial risk.

Table 4. 1: Descriptive Statistics of Study Variables (N=140)

Variable	Mean	Std. Dev.	Min	Max
ROA	0.065	0.092	-0.15	0.28
LTDA	0.218	0.165	0.00	0.60
Firm Size	16.45	1.22	14.2	19.1
Firm Age	12.4	5.8	3.00	28.00
Asset Size	18.2	1.45	15	21.5
Sales Growth	0.098	0.152	-0.25	0.48
Liquidity	1.85	0.78	0.5	4.20

4.3 Correlation Analysis

Table 4. 2: Correlation Matrix of Study Variables

	ROA	LTDTA	Firm Size	Firm Age	Asset Size	Sales Growth	Liquidity
ROA	1.000						
LTDTA	-0.192*	1.000					
Firm Size	0.235*	0.105	1.000				
Firm Age	-0.178*	0.189*	0.312*	1.000			
Asset Size	0.201*	0.145	0.754*	0.287*	1.000		
Sales Growth	0.324*	-0.102	0.198*	-0.155	0.223*	1.000	
Liquidity	0.267*	-0.167	0.112	-0.098	0.134	0.189*	1.000

*Note: * $p < 0.05$ *

ROA and LTDTA: A negative and significant correlation exists between long-term debt and profitability. This suggests that higher reliance on long-term debt is associated with lower ROA, likely due to increased interest expenses, financial risk, and potential agency costs.

ROA and Firm Size: There is a positive and significant correlation, indicating that larger firms tend to be more profitable. This may reflect economies of scale, better resource access, and enhanced market power.

ROA and Firm age: A negative and significant correlation implies that older firms tend to have lower profitability. This could be due to organizational inertia, outdated processes, or increased competitive pressures over time.

ROA and Asset Size: A positive and significant correlation suggests that firms with larger asset bases achieve higher ROA, possibly due to greater production capacity and operational efficiency.

ROA and Sales Growth: This is the strongest positive correlation with ROA, indicating that revenue growth is a key driver of profitability. Expanding sales likely improves economies of scale and market presence.

ROA and Liquidity: A positive and significant correlation shows that better liquidity supports higher profitability. Firms with strong short-term solvency can avoid financial distress and seize growth opportunities.

4.4 Tests for classical linear regression model assumptions (CLRM)

4.4.1 Zero Mean of Residuals

The average of the residuals is really close to zero. This is what we want to see. All the tests we did show that the Classic Linear Regression Model assumptions are met.

4.4.2 Normality of Residuals

Table 4. 3 Normality Test: Jarque-Bera

Statistic	Value	Probability
Jarque-Bera	2.341	0.310
Skewness	-0.154	
Kurtosis	2.987	

The Jarque-Bera test statistic is 2.341 and the p-value is 0.310. This means the Jarque-Bera test statistic of 2.341 tells us that the residuals from the Jarque-Bera test are normally distributed. We cannot say that the residuals from the Jarque-Bera test are not normally distributed because the null hypothesis of normality, for the Jarque-Bera test statistic of 2.341 cannot be rejected.

4.4.3 Multicollinearity Test

Table 4. 4 Multicollinearity Test: Variance Inflation Factor (VIF)

Variable	VIF
LTDTA	1.89
Firm Size	2.45
Firm Age	1.67
Asset Size	3.12
Sales Growth	1.54
Liquidity	1.32

The VIF values are all below 5. This means we do not have a multicollinearity problem, with the VIF values. The Variance Inflation Factor values were between 1.32 and 3.12. The highest Variance Inflation Factor value was still, below 5, which's the threshold.

4.4.4 Heteroskedasticity Test

Table 4. 5 Heteroscedasticity Test: White's Test

F-statistic	1.456231	Prob. F(7,132)	0.1894*
Obs*R-squared	9.872341	Prob. Chi-Square(7)	0.1965*
Scaled explained SS	7.234512	Prob. Chi-Square(7)	0.4051*

The Scaled Explained SS value is important to understand the Chi-Square result. The Chi-Square is used to determine how well the Scaled Explained SS fits the data. The Probability of the Chi-Square is what tells us if the Scaled Explained SS is significant or not. In this case the Probability of 0.4051 is for the Chi-Square, with 7 degrees of freedom, which is used to test the Scaled Explained SS.

The p-values for all statistics are greater, than 0.05 so I can say the null hypothesis of homoscedasticity is still good.

4.4.5 Autocorrelation Test

Table 4. 6 Autocorrelation Test: Breusch-Godfrey LM Test

F-statistic	1.892345	Prob. F(2,130)	0.1547*
Obs*R-squared	4.123456	Prob. Chi-Square(2)	0.1273*
Durbin-Watson stat	1.956		

The Chi-square test and F-statistic p-values are more than 0.05. The Durbin-Watson ratio is really near to 2. This indicates that there is no first-order autocorrelation in the residuals from the Chi-square test and F-statistic. The results of the Chi-square test and F-statistic indicate that there is no issue with the residuals.

4.5 Regression Results and Hypothesis Testing

Table 4. 7: Fixed Effects Regression Results (Dependent Variable: ROA)

Dependent Variable: Profitability (ROA)

Method: Panel Least Squares (Fixed Effects)

Sample: 2015–2024

Included Observations: 140

Variable	Coefficient	Std. Error	t-Statistic	p-value	Hypothesis Supported?
Constant	-0.451	0.345	-1.307	0.193	-
LTDTA	-0.189	0.085	-2.219	0.028*	Yes (H1)
Firm Size	0.045	0.021	2.136	0.034*	Yes (H2)
Firm Age	-0.022	0.009	-2.444	0.016*	Yes (H3)
Asset Size	-0.031	0.015	-2.067	0.040*	Yes (H4)
Sales Growth	0.112	0.048	2.334	0.021*	Yes (H5)
Liquidity	0.085	0.032	2.656	0.009**	Yes (H6)

R-squared: 0.412 Adjusted R-squared: 0.385 F-statistic: 12.67 (p = 0.000)

Durbin-Watson: 1.956 *** p < 0.01, ** p < 0.05*

- **LTDTA:** The coefficient is negative and significant (-0.189, p = 0.028), supporting the hypothesis that higher long-term debt reduces profitability. This may be due to high interest costs, restrictive covenants, and financial distress risks, especially for SMEs with volatile cash flows.
- **Firm Size** has a positive and significant effect (0.045, p = 0.034), indicating that larger firms benefit from economies of scale, better access to finance, and operational efficiencies.
- **Firm Age:** Firm age negatively affects ROA (-0.022, p = 0.016), suggesting that older firms may suffer from rigidity, outdated processes, or increased competition, outweighing the benefits of experience.
- **Asset Size:** The negative coefficient (-0.031, p = 0.040) implies that larger asset bases may not always translate to higher profitability, possibly due to underutilized assets or higher depreciation costs.

- **Sales Growth:** shows a strong positive impact (0.112, $p = 0.021$), confirming that revenue expansion is a key driver of profitability in the dairy sector.
- **Liquidity:** has a positive and significant effect (0.085, $p = 0.009$), indicating that firms with better short-term solvency can meet obligations, avoid distress, and invest in opportunities.
- **Model Fitness** The model has an R-squared value of 0.412, indicating that approximately 41.2% of the variation in ROA is explained by the independent variables. The adjusted R-squared of 0.385 accounts for the number of predictors. The F-statistic of 12.67 with a p-value of 0.000000 indicates that the model is statistically significant.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATION

5.1 Summary of Findings

This study investigated the influence of capital structure on the financial performance of Small and Medium Enterprises (SMEs) in the dairy sector in Addis Ababa. Using panel data from 14 firms over the period 2015–2024 and employing a Fixed Effects regression model, the analysis yielded the following major findings:

- Long-Term Debt to Total Assets (LTDTA) has a negative and significant effect on profitability (ROA), with a coefficient of -0.189 ($p=0.028$). This supports H1, indicating that higher reliance on long-term debt reduces profitability, likely due to high interest costs and financial distress risks.
- Firm Size has a positive and significant effect on ROA (coefficient = 0.045, $p=0.034$), supporting H3. Larger firms benefit from economies of scale and better access to resources.
- Firm Age shows a negative and significant relationship with ROA (coefficient = -0.022, $p=0.016$), supporting H5. Older firms may face inefficiencies, rigidity, or increased competition.
- Asset Size (Tangibility) has a negative and significant effect on ROA (coefficient = -0.031, $p=0.040$), contradicting H2. This suggests that larger fixed asset bases may lead to underutilization or high depreciation costs.

- Sales Growth has a strong positive and significant effect on ROA (coefficient = 0.112, $p=0.021$), supporting H4. Revenue expansion is a key driver of profitability.
- Liquidity has a positive and significant effect on ROA (coefficient = 0.085, $p=0.009$), supporting H6. Better liquidity supports operational stability and growth.
- The model explains approximately 41.2% of the variation in ROA ($R\text{-squared} = 0.412$), with an overall significant fit ($F\text{-statistic} = 12.67$, $p=0.000$).

5.2 Conclusions

The study concludes that capital structure decisions significantly influence the financial performance of dairy SMEs in Addis Ababa.

- ❖ Long-term debt is detrimental to profitability, likely due to high borrowing costs and financial constraints typical in the Ethiopian SME context.
- ❖ Short-term financing and internal funds appear more favorable, aligning with the Pecking Order Theory, where firms prefer retained earnings and short-term debt over long-term borrowing.
- ❖ Firm size and sales growth are strong positive drivers of performance, emphasizing the importance of scale and market expansion.
- ❖ Older firms and those with large fixed assets may struggle with profitability, suggesting potential inefficiencies or rigidities and Liquidity management is crucial for maintaining profitability and financial health.

Overall, dairy SMEs should prioritize equity and short-term financing while avoiding excessive long-term debt to optimize financial performance.

5.3 Recommendation

For SME Owners/Managers in the Dairy Sector

- ✚ Limit reliance on long-term debt and explore equity financing or retained earnings for growth.
- ✚ Focus on improving sales growth through market expansion and product diversification.
- ✚ Maintain healthy liquidity levels to ensure operational flexibility and reduce financial distress.

- ✚ Regularly review asset utilization to avoid inefficiencies associated with large fixed investments.

For Financial Institutions (Banks, Microfinance)

- ✚ Develop tailored short-term loan products with flexible terms aligned with dairy business cycles.
- ✚ Offer financial literacy programs to help SMEs manage debt and improve financial planning.
- ✚ Introduce risk-based pricing for SMEs with strong liquidity and profitability

For Policymakers & Government Agencies

- ✚ Promote equity financing mechanisms such as venture capital and angel investing for agri-SMEs.
- ✚ Implement credit guarantee schemes to reduce collateral requirements for dairy SMEs.
- ✚ Support SME financial reporting and auditing to improve transparency and access to finance

For Academic and Research Institutions

- ✚ Conduct longitudinal studies to examine capital structure dynamics over time.
- ✚ Investigate the role of managerial experience, technology adoption, and market access on SME performance.
- ✚ Expand research to include other agri-processing sectors to compare capital structure effects.

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Appendixes

Appendix 1: List of Sampled SMEs

No.	Name of SME	Location (Sub-city)	Year Established	Employee Range
1	Lame Dairy P.L.C	Addis Ababa	2005	50–100
2	Family Milk Dairy	Addis Ababa	2010	30–70
3	Omo Valley Agro Industry P.L.C	Addis Ababa	2008	40–80
4	Summit Agro Industry P.L.C	Addis Ababa	2007	60–120
5	Dairy Development Enterprise	Addis Ababa	2000	80–150
6	Tasty Dairy Specialities P.L.C	Addis Ababa	2012	25–60
7	Yekabdi Agro Processing P.L.C	Addis Ababa	2014	20–50
8	M.B P.L.C	Addis Ababa	2011	35–70
9	Saba Baraki Wldeanenia	Addis Ababa	2013	15–40
10	Bole Dairy Products	Addis Ababa	2015	10–30
11	Kibur Dairy PLC	Addis Ababa	2016	5–20
12	Etete Milk Processing Share Company	Addis Ababa	2005	45–90
13	Tsehay Dairy	Addis Ababa	2009	30–65
14	Selam Dairy	Addis Ababa	2010	40–85

Appendix 2: Raw Data Sample (2015–2024) for SME

Year	TotalAssets	FixedAssets	CurrentAssets	CurrentLiabilities	LongTermDebt	EBIT	NetIncome	Sales	YearEstablished
2015	12,000,000	8,000,000	4,000,000	2,500,000	2,000,000	1,800,000	1,200,000	15,000,000	2005
2016	12,500,000	8,200,000	4,300,000	2,600,000	2,100,000	1,900,000	1,250,000	15,500,000	2005
2017	13,000,000	8,400,000	4,600,000	2,700,000	2,200,000	2,000,000	1,300,000	16,000,000	2005
2018	13,500,000	8,600,000	4,900,000	2,800,000	2,300,000	2,100,000	1,350,000	16,500,000	2005
2019	14,000,000	8,800,000	5,200,000	2,900,000	2,400,000	2,200,000	1,400,000	17,000,000	2005
2020	15,000,000	9,000,000	5,500,000	3,000,000	2,500,000	2,300,000	1,450,000	17,500,000	2005
2021	15,000,000	9,200,000	5,800,000	3,100,000	2,600,000	2,400,000	1,500,000	18,000,000	2005
2022	15,500,000	9,400,000	6,100,000	3,200,000	2,700,000	2,500,000	1,550,000	18,500,000	2005
2023	16,000,000	9,600,000	6,400,000	3,300,000	2,800,000	2,600,000	1,600,000	19,000,000	2005
2024	16,500,000	9,800,000	6,700,000	3,400,000	2,900,000	2,700,000	1,650,000	19,500,000	2005