Addis Ababa University

College of Business and Economics

Department of Accounting and Finance

The Effect of Capital Structure on the Financial Performance of Addis Ababa large Food and Beverage Manufacturing industry.

A Thesis submitted to Addis Ababa University College of Business and Economics Department of Accounting and Finance in Partial Fulfillment of the Requirements for the Degree of Master of Science in Accounting and Finance.

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Addis Ababa

Statement of Declaration

I undersigned declare that this study entitled "Effect of Capital Structure on the Financial Performance of Addis Ababa large Food and Beverage Manufacturing industry" is my own work. I have carried out independently the research work with the guidance and support of the research advisor. This study has not been submitted to any degree/diploma in this or any other institution. It is done in partial requirement of the MSc Degree in Accounting and Finance.

Declared by:

Name: **Getachew Tilahun**

Signature: _____

Date: 17/02/2025

Statement of Certification

This is to certify that **Getachew Tilahun** has carried out his research work on the topic entitled "Effect of Capital Structure on the Financial Performance of Addis Ababa large Food and Beverage Manufacturing industry". This work, to the best of my knowledge, is original in nature and is suitable and accepted for submission for the award of MSc in Accounting and Finance.

Advisor: **Degefa Duressa (PhD)**

Date: 17/02/2025

Approval Sheet

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This is to certify that the thesis prepared by **Getachew Tilahun**, entitled: **Effect of Capital Structure on the Financial Performance of Addis Ababa large Food and Beverage Manufacturing industry** and submitted in partial fulfillment of the requirements for the degree of Master of Science in Accounting and Finance complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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Advisor: Degefa Duressa (PhD) **Signature** _____ **Date** 17/02/2025

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List of Acronyms

ATA	Asset tangibility
DTA	Debt to asset ratio
EBIT	Earnings before interest and tax
EPS	Earning per share
ERCA	Ethiopian revenue and custom authority
GRO	Growth of sales
INF	inflation
LTO	Large Taxpayers Office
LDTE	Long term debt to equity ratio
LFBMC	Large food and beverage manufacturing companies
LIQ	Liquidity Ratio
LTO	Large trade office
ROA	Return on asset
ROE	Return on equity
SIZ	Size of firms
WACC	Weighted average cost of capital

Abstract

The effect of capital structure on firm value has been a contentious issue in corporate finance, with inconsistent and inconclusive findings across various industries and countries. This study aims to examine the effect of capital structure decisions on the financial performance of large food and beverage manufacturing companies in Addis Ababa, Ethiopia. The primary objective is to analyze the effect of debt ratio and long-term debt to equity ratio on profitability, as measured by Return on Assets (ROA), while considering other variables such as firm size, liquidity, asset tangibility, sales growth, age, and inflation rate. Using secondary panel data from the audited financial statements of 12 large food and beverage companies for the period 2017-2022, the study employs econometric analysis to investigate these relationships. The findings reveal that capital structure, particularly higher leverage or debit ratio has a significant negative impact on financial performance, with long-term debt to equity ratio also having a statistically significant negative relationship with ROA .this is because of the excessive costs associated with debt .additionally asset tangibility and age of firms having significant negative relationships with ROA. 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 food and beverage 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.

Key words: *Capital structure, Financial performance, Food and beverage industry, Debt ratio Long-term debt to equity ratio, Return on Assets, Firm size, Asset tangibility, Liquidity and Sales growth*

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Marshal H. (2022) writes on his work, capital is anything that gives its owner a value for their companies and mostly defines the money used to make things or investments. It is essential for the day to day operations of a business. There are mainly three types of capital. The first one is debt capital that are a type of capital in which a company can get money by taking out loans which come from either the public or the private financial sector or lending institutions. The second one is equity capital that involves an investment of money in the form of equity in a company to generate a return and the last but not the least is working capital. This capital is also the cash that a business has on hand to meet its daily needs, receivables that are collected throughout the year and the inventories that are parts of the business operations. There is an important point here concerned with increasing the value of a firm is managing the cost associated with debt capital and increasing the returns of equity capital. This requires an adequate financing decision by financial managers. So for implementing this an adequate decisions a financial manager must formulate optimal capital structures.

The term capital structure refers or described as the relationship between the various long term sources of financing such as equity capital, preference shares capital, debt capital as parmasivan and Subramanian (2009) and the cost of equity that involves an opportunity cost of retained earnings which is the rate of return on dividend forgone by equity holders and the cost of external equity is the minimum rate of return which the shareholders require on funds supplied by them by purchasing new shares to prevent a decline in the existing market price of the equity share wakida (2011). Capital structure is the permanent and continuous financing of the company represented primarily by long term debt and equity indeed deciding the suitable capital structure is the most important decisions of the financial management because it is closely related to the value of the firm.

The capital structure issue and its impact on firms value can be traced back to MM 1958 work which argued that under certain conditions, the choice between debt and equity does not affect firm value since the value of firms and its costs of capital are not affected by its optimal capital

structure and the only variables that determined firm value was its future earning power (expected cash flows) and hence the capital structure decision is irrelevant. However real economies are far from perfect and thus many financing decision theories were developed overtime in order to demonstrate the purpose of capital mix and its role in company value. A few years after the irrelevance theory, MM (1963) revised the conditions and explained that interest expenses are tax deductibles and therefore the value of the firm should increases with a higher debt ratio.

Capital structure is a more remarkable topic because it is in the process of research both at academic level and corporate level since the financing decision of a firm are of vital importance for its operating and investing activities. Therefore there is a debate regarding that does an optimal capital structure exist and how capital structure affects firm performance and vice versa. According to Brigham and Ehrdardt (2011) the main purpose of capital structure is to sustain the optimal mix of debt and equity. A firm's capital structure decision includes its choice of a target capital structure. The average maturity of its debt and the specific types of financing, it decides to use at any particular times as with operating decisions managers should make capital structure decisions that are designed to maximize the firms intrinsic value. Mostly companies select any capital structure that they want. According to managers motive a firm could issue some bonds and use the proceeds to buy back for the purpose of using the money to pay off some debit there by decreasing the debt equity ratio (Allen, 2011). The value of the firm can be maximized by minimizing its cost of capital. Therefore one of the major goals in current strategic management is to identify the optimal capital structure. The optimal capital structure exists only when the debt and equity combine to reduce the cost of capital and enhance the firm's profitability. So that the management of the firms itself has to set their capital structure in a way to maximize their firm value and this decision is really important (Tailab, 2014). Although in the real world determining an optimal capital structure for a company is multifaceted problem that has challenged financial managers of a company, academic scholars and practitioners for a long time because they face difficulty of exactly determining the optimal capital structure (Johannes D.W 2007).

The financial performance of companies indicates the strength of financial position of an organization and it is analyzed by financial analysis of variables that are directly related with capital structure. So financial analysis is relevant for identifying the financial strength and weakness of the firm by properly formulating relationships between the items of the balance sheet

and the profit or loss statements for representing the ratio of capital structure variables. In financial analysis a ratio is used as a benchmark for evaluating the financial position and performance of a company by applying capital structure variables (Kifle A.2016).

In order to achieve a wealth maximization goal of a company, there are many limiting factors which determine their respective profits of a company managers and stakeholders continuously assess and monitor those factors for reducing or managing their negative impacts and to enhancing those that have parallel positive impacts on the profitability of a firm. Those factors used for this research are Debt ratio, long term debt to equity ratio, Size, liquidity, Asset Tangibility, sales growth, Age and Inflation Rate.

Food and beverage industries are the bases to the economy of Ethiopia and for the existence of human kind. Ethiopian food and beverage market size is poised to report strong growth rate over the forecast period due to increasing population, rising dispensable incomes, coupled with changing trends and product innovation, increasing number of restaurants, fast food, chain and food delivery application as reported by "Food and beverages markets, size, share, outlook and growth opportunities 2020- 2026"(2019). So that it is beneficial to be guided by the goal of maximizing firm's value as well as the relevant propositions of the various theories on capital structure. A firm in the large food and beverages industries here in this study explains to companies engaged in the activities specified by food, beverage and pharmaceuticals industry development institute of Ethiopia. Thus this study examines the effects of capital structure decisions on the financial performance of large food and beverage companies in Addis Ababa, Ethiopia.

1.2 Statement of the problem

The affecting factors of capital structures on firm value have been contested for many years and up to now notifies the most unresolved affairs in corporate finance literatures. Morri and Beretta (2008) explained that the theoretical and empirical studies of capital structure have addressed those affairs but there is no a fully supported and generally feasible theory and the debate on the significance of determining factors of Capital structure and firm value is still open. So the empirical studies undertaken were also inconclusive and inconsistent with respect to one country to another country, from industry to industry, with regard to size of the company, and leverage

utilization. The studies of Ahmed, M. (2015), Neway, A. (2016) and Bingy V.S. (2017) found a result of negative relationships between debt ratio and profitability of a firm. Similarly Haomin, C. (2020) conducted a research on a sample of 1079 Chinese listed companies for the period of 2010-2019. To test the impact of financial leverage on firm performance and the moderating role of operating leverage. On this relationships, the result indicates that higher financial leverage could adversely impact on firm performance. By using different measurement of a firm performance and average industrial financial leverage as an instrumental variable for financial leverage to take robustness tests. This study establishes a plausible relationship between leverage and firm performance. These results are contrasts with those of most scholars, that financial leverage and firm performance are negatively correlated. Additionally Anandasayanan, S. and Subramanium, V.A. (2013) on their study under the title of the effect of capital structure on profitability of listed manufacturing companies in Srilanka found a result of negative relationships between debt ratio, long term loan to asset ratio and short term loan to asset ratio with that of a net profits ratio(measure of profitability).

Adamu, Y. (2018) conducts a research on capital structure and corporate performance of pharmaceutical manufacturing firms of Ethiopia. The study used secondary panel data which consists of time series and cross-sectional data that are extracted from the financial statements of the seven selected pharmaceutical manufacturing firms of Ethiopia covering the years from 2007-2016. The data is analyzed using interactive econometrics software packages of E-view 9. A capital structure which is measured by long term debt to equity ratio and total debt to asset ratio and corporate performance is measured by return on asset (ROA). The results show that firm leverage measured by long-term to equity ratio has negative and statistically significant relation with return on asset.

Halake, J. (2020) studied the effect of leverage on the profitability of medium tax payers of food and beverage manufacturing companies in Addis Ababa. A capital structure which is the independent variable has been measured by leverage and profitability measured by return on asset (ROA). The results of the regression shows that there is a negative and highly significant relationship between leverage ratio and profitability, while others Tufa, F.B (2016), analyzes the impact of corporate capital structure on profitability based on the data from manufacturing firms

in Ethiopia and his finding shows that there is a significant positive relationship between capital structure variables (short-term liabilities to total liabilities ratio, long-term debt capitalization ratio and interest coverage ratio) and profitability (ROCE).

Birassa, F. (2016) shows that short-term debt to total liability, long-term debt capitalization ratio and interest coverage ratio showed positive and significant impact on profitability of Ethiopian manufacturing firms.

Aragie et al. (2015) assess the relationship between capital structure and financial performance of commercial banks in Ethiopia. On their studies return on asset, return on equity and net profit margin as a dependent variables to measure financial performance and total debt to total asset and total debt to total equity used as a capital structure variables. The finding were shows that leverage has a positive effect on the financial performance of commercial banks in Ethiopia when performance measured by return on equity.

Liku, Y. (2017) also tried to identify the effect of capital structure on financial performance of microfinance institutions in Ethiopia. The sample selected was 18 microfinance institutes under category A and B only. Panel data analysis technique was in use and secondary data were collected from the annual reports during the period of 2010-2015. Return on equity (ROE) was used as a financial performance measure and debt to asset ratio (DTAR), interest coverage ratio and loan to deposit ratio as a capital structure variables. The finding shows that most of the microfinance institutions had employed high leverage and capital structure variables do have a positive relation with financial performance of microfinance institutions in Ethiopia.

Melese, A. (2013). Conducts a research for assessing the effect of capital structure on financial Performance of Ethiopia metal and engineering industry. The study uses secondary data collected from annual financial reports from 2007 to 2012. ROE was used as a performance measure and total debt ratio, short term debt ratio and long term debt ratio were used as capital structure variables. Panel data type analyses were applied. The finding of the study shows a positive effect of capital structure variables (debt ratio, short term debt ratio and long term debt ratio) on financial performance of Ethiopian metal and engineering industry in their studies found that

there is direct and positive relationship exists between capital structure and financial performance of firms.

Based on the previous studies, there is an issue of inconsistency on their findings concerning with the effect of capital structures on financial performance of firms which initiates the researcher in filling the gap by putting its own contribution about the effect of capital structures on financial performance of large food and beverage companies of Addis Ababa, Ethiopia.

1.3 Objective of the study

1.3.1 General objectives of the study

The general objective of this study will be to analyze the effect of capital structure on financial performance of firms that are engaged in food and beverage manufacturing companies operated in Addis Ababa.

1.3.2 Specific objectives of the study

Specific objectives this study was;

- To examine effect of capital structure variables (leverage) or Debt ratio on the financial performance of large food and beverage manufacturing companies in Addis Ababa.
- To examine effect of capital structure variable (long term to equity ratio) on the financial performance of large food and beverage manufacturing companies in Addis Ababa.
- To examine effect of Size on the financial performance of large food and beverage manufacturing companies of Addis Ababa.
- To examine effect of liquidity on the financial performance of large food and beverage manufacturing companies of Addis Ababa.
- To examine effect of Asset Tangibility on the financial performance of large food and beverage manufacturing companies of Addis Ababa.
- To examine effect of sales growth on the financial performance of large food and beverage manufacturing companies of Addis Ababa.
- To examine effect of Age on the financial performance of large food and beverage manufacturing companies of Addis Ababa.

- To examine effect of Inflation Rate on the financial performance of large food and beverage manufacturing companies of Addis Ababa.

1.4 Research Hypothesis

According to Kothari (2004), a hypothesis refers to assumptions or suppositions that are either proven or disproven. Simply put, it is a proposition or set of propositions put forward to explain the occurrence of a particular phenomenon, either as a provisional conjecture to guide an investigation or as an explanation that is highly probable based on established facts. A research hypothesis is a conclusion that can be tested using scientific evidence and establishes a relationship between an independent variable and a dependent variable. To achieve the objectives of this study, eight hypotheses have been developed regarding the effect of capital structure on the profitability of large food and beverage manufacturing companies in Addis Ababa, based on a review of various empirical studies.

H1: There is significant and negative relationship between total debt to asset ratio and financial performance of large Addis Ababa food and beverage firms.

H2: There is significant and negative relationship between long-term debt to equity ratio and financial performance of large food and beverage firms of Addis Ababa.

H3: There is significant and positive relationship between Firm Size and financial performance of large Addis Ababa food and beverage firms.

H4: There is significant and positive relationship between Sales Growth and financial performance of large Addis Ababa food and beverage firms.

H5: There is significant and negative relationship between Asset Tangibility and financial performance of large Addis Ababa food and beverage firms.

H6: There is significant and positive relationship between Liquidity Ratio and financial performance of large Addis Ababa food and beverage firms.

H7: There is significant and negative relationship between Firm Age and financial performance of large Addis Ababa food and beverage firms.

H8: There is significant and negative relationship between Inflation Rate and financial performance of large Addis Ababa food and beverage firms.

1.5 Significance of the Study

Numerous studies have been conducted, both in Ethiopia and abroad, on the effect of capital structure on the financial performance of firms. This research aims to help financial managers better understand how capital structure variables impact the financial performance of large food and beverage companies. Specifically, it seeks to assist financial managers in determining the optimal capital structure by considering the effects of various levels of debt. Furthermore, this research is not only intended for financial managers of food and beverage manufacturing companies but also as a valuable resource for future researchers. It provides insights into the relationship between capital structure and firm performance for the selected sample of food and beverage companies, offering educational value to readers on this critical subject.

1.6 Scope of the Study

The study focused on assessing the effect of capital structure on the financial performance of large food and beverage manufacturing companies in Addis Ababa. It utilized audited financial statements from these firms for the period between 2017 and 2022 that uses only quantitative data approach. The analysis was based on six years of data from twelve large food and beverage manufacturing companies, all categorized under the Large Taxpayer Authority. These companies were selected because their classification as large taxpayers indicates their significant economic contribution compared to small and medium-sized taxpayers. The study employed one dependent variable, return on assets (ROA), and eight independent variables: debt ratio, long-term debt-to-equity ratio, firm size, liquidity, asset tangibility, sales growth, firm age, and inflation rate.

1.7 Limitations of the study

Due to the absence of a secondary financial market in Ethiopia, the researcher was required to measure both the dependent variable and the proxies for the independent variables using book values rather than current market values. This study relied exclusively on secondary data, specifically the annual audited financial statements of large food and beverage manufacturing firms in Addis Ababa. Primary data was not considered in this research, making the quality of the study entirely dependent on the accuracy, reliability, and quality of the secondary data sources.

The analysis covers the time period from the 2017 to 2022 fiscal years. Since the most recent data from 2023 was not available, this study is limited to evaluating the financial performance of large food and beverage manufacturing companies up to 2022. Additionally, the research focuses only on companies that report their financial statements to the Large Taxpayer Office in Addis Ababa.

1.8 Organization of the Study

The structure 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, while the final chapter concludes the study and offers recommendations.

CHAPTER TWO: REVIEW OF RELATED LITERATURES

This chapter presents the theoretical and empirical literature review of capital structures. Part 2.1 covers the theoretical literature review, part 2.2 about the overview of capital structures and components of capital structures, part 2.3 covers about review of empirical studies, part 2.4 covers about the influence of other variable on firms performance, part 2.5 about chapter conclusions and knowledge gaps and the last part 2.6 is about the conceptual framework of the effects of capital structure on financial performance of manufacturing firms especially on large food and beverage manufacturing companies Addis Ababa.

2.1 Theoretical literature review

2.1.1 Modigliani and Miller (MM) theory

The capital structure theory helps us to understand the factors most important in the relationship between capital structure and the value of the firms.

Franco Modigliani and Merton Miller (MM 1958) developed a theory that is important to understand how taxes and financial distress affect a company's capital structure decisions. Despite it had a very strong theoretical foundation, the capital structure irrelevance theory was predicated on a faulty set of premises This helps us to work through the effects of the capital structure decisions when investors have homogenous expectations regarding future cash flows, financial instruments traded under perfect market, investors can lend and borrow money at the same rate, there are no fees for agencies, and investments and financial decisions are made independently of one another.

Modigliani, F. and Miller, M.H. (1963) on their paper titled "Corporate Income taxes and the Cost of Capital: A Correction" was published five years after MM introduced Proposition I & II. It was an extension and correction of the Propositions that they had introduced five years earlier, where taxes had been included. Both propositions were impacted by the addition of taxes. The two propositions, with and without taxes, are explained below.

Modigliani and Miller preposition I: No Taxes

Modern capital structure theory began in 1958, when MM published what has been called the most influential finance article ever written. MM's study was based on some strong assumptions,

which included the following assumptions (Ehrhardt & Brigham, 2011; Quiry et al., 2009): There are no brokerage costs, there are no taxes, there are no bankruptcy costs, Investors can borrow at the same rate as corporations, Investors have the same information as management and EBIT is not affected by the use of debt. The "real world" approach conflicts with the capital structure idea of perfect markets. The corporation can mix any ratio of debt to equity to create its capital structure without it having any impact on the firm's value since, as stated in MM (1958), the firm's value is determined by its ability to generate future earnings (future cash inflow). However, bear in mind that these hypotheses rely on a flawless capital market. The proposition of no taxes or irrelevant proposition can be stated according to Ross et al. (2011), MM Proposition I (no taxes): The value of the levered firm is the same as the value of the unlevered firm. MM showed a simple result: if levered firms are priced too high, rational investors will simply borrow on their personal accounts to buy shares in unlevered firm. This substitution is oftentimes called home made leverage. Investors may use homemade leverage, or risk substitution, to switch from overvalued shares in highly leveraged companies to those in unlevered companies by borrowing in personal accounts. The MM theorem also examines the impact of shifting leverage on overall cash flow and return on equity (from the perspective of investors).

Firstly, the effect produced by changing leverage on total cash flow is absence. This suggests that, regardless of the leverage, the WACC remains the same, according to Quiry et al. (2009). Secondly, Ross et al. (2011) in their book corporate finance: Core Principles & Applications writes the effect of change in leverage on stockholders. They show the change in capital structure benefit the stockholders if and only if the value of the firm increases. Conversely, these changes hurt the stockholders if and only if the value of the firm decreases. So, Managers should choose the capital structure that they believe will have the highest firm value, because this capital structure will be most beneficial to the firm's stockholders. This finding is reinforced or claimed by Olokoyo (2012), who found that because leverage increases equity risk, the expected return on equity is positively correlated with leverage. so generally MM propositions I states that the market value of a companies is not affected by the capital structures of the companies based on the assumptions that are no taxes, costs of financial distress, or agency costs so investors would have firms with the same cash flows at the same regardless of how firms are financed. Due to the reason that there is no benefit to borrowing at the firm level because there is no interest

deductibility, firms would be indifferent to the sources of capital and investors could use financial leverage if they needs.

Modigliani and Miller II: impact of Corporate Taxes

According to MM 1958, businesses that use debt to partially finance their operations can deduct the interest they pay from the income tax they must pay. It creates a higher total value for a firm that is financed with debt and equity, a leveraged firm, than for a firm that is financed only with equity, an unleveraged firm. The worth of a company is equal to its cash flow value without the benefit of a debt tax shield plus its present value of tax shield in the case of perpetual cash flows. Dividend payments to investors are not deductible under the Tax Code; however corporations are permitted to deduct interest payments as a cost. The differential treatment encourages corporations to use debt in their capital structures. As a result, interest payments lower the amount of taxes that a firm must pay to the government, freeing up more of its cash flow for its investors. In other words, the firm's pretax income is protected by the interest payments' tax deduction. When the debt level is modest, the tax shield frequently outweighs the rise.

However, according to Malm and Roslund (2013), when the debt level reaches a particular level, the risk of default on the debt payments increases to the point where the increase in the cost of equity will be more than the decrease from the tax shields. The effective cost of debt is typically lower than equity since interest payments on debt higher in most cases. In other words, the firm's pre-tax income is protected by the interest payments' tax deduction. When the debt level is modest, the tax shield frequently outweighs the rise. However, according to Malm and Roslund (2013), when the debt level reaches a particular level, the risk of default on the debt payments increases to the point where the increase in the cost of equity will be more than the decrease from the tax shields. The effective cost of debt is typically lower than equity since interest payments on debt are lower in most cases. The return on equity metric of financial success is also enhanced by increased loan leverage (Asaf, 2004). Therefore, compared to equity, debt is a more desirable form of capital for businesses because the interest paid on the debt is deducted from taxable income and lowers the amount that will be paid to the government. However, when leverage grows, the cost of debt rises and credit ratings fall as a result. Other things remaining equal, the benefits of debt are greater when tax rates are higher.

2.1.2 Trade off theory

The basic theory that dominates the capital structure theory which recommends that optimal level of the debit is where the marginal benefit of debit finance is equal to its optimal cost. Firms can achieve an optimal capital structures through adjusting the debit and equity level thereby balancing the tax shield and finance distress cost. There is no consensus among researchers on what consist the benefit and cost.

Eliminating the constraints of the capital structures irrelevance propositions MM (1984) use the tradeoff theory as a theoretical foundations to explain the capital structures. Myers (1977) suggests that the use of debit up to a certain level offset the cost of financial distress and interest tax shield. According to Fama and French (2002) the optimal capital structures can be identified through the benefit of tax debt deductibility of interest and cost of bankruptcy and agency cost. The results of MM depend on the assumption that there are no bankruptcy costs. However, bankruptcy can be quite costly. Businesses that are bankrupt have very expensive legal and accounting costs and struggle to keep their clients, vendors, and staff. Additionally, bankruptcy frequently compels a company to liquidate or sell assets for less than they would be worth if the company were to carry on with business as usual. Additionally, important personnel leave their companies, suppliers refuse to extend credit, consumers look for more reliable suppliers, and lenders demand higher interest rates and more restrictive loan covenants if potential bankruptcy looms as Ehrhardt & Brigham (2011). The likelihood of bankruptcy related issues arising increases when a company has a significant amount of debt in its capital structure. Because of the high expenses associated with bankruptcy, businesses are deterred from using debt excessively. The tradeoff theory tries to explain how a firm can achieve an optimal capital structure by adjusting their debt and equity levels so there is a balance between the benefits from their tax shelter and costs associated with financial instability. As capital structure was defined as a mix of debt and equity, firms hope to reach the optimal capital structure with lowest WACC and highest firm value Roslund and Malm (2013). The theory states that the ideal capital structure is obtained when the present value of the tax shield is just slightly greater than the present value of the costs associated with financial hardship. The ideal capital structure does exist, based on the tradeoff models. A company is thought to set a target debt level and nudge closer to it over time. The balance between the impact of corporate and personal taxes, bankruptcy expenses, and

agency fees will determine the firm's ideal capital structure. Bankruptcy-related cost was divided for two components by Ehrhardt & Brigham (2011); (1) the probability of financial distress and (2) the costs that would be incurred if financial distress does occur. Main focus of a firm is to substitute debt for equity, vice versa in order to find optimal debt ratio and maximize value of the firm. Therefore, to have the best capital structure, trade-off theory can be summed up as balancing the various costs and benefits related with debt financing. Due to the decrease in free cash flow, debt also serves as a form of discipline (Gansuwan & Nel, 2012). Another crucial component of the theory is the tax shield. Firms can deduct interest payment of debt from tax, as a result net income of the firm's increases. Businesses may decide to take on more debt to optimize their tax shield. The trade-off theory, according to Niu (2008), states that maximizing the advantages of the tax shelter provided by debt will increase corporate profitability. It's interesting to see how, throughout time, other academics have continued to use the MM theory as a springboard for their own study, with some even contesting the theory's application to the state of the world's economy now. They contend that the theory's implication that highly profitable businesses should carry more debt in order to shield their profits from taxes is unsupported by empirical data. According to an extension of this idea made by Gangeni (2006) in his study, the amount of debt a company can take on has a limit because higher borrowing costs make businesses less profitable, which reduces the tax shelter's effectiveness.

2.1.3 Pecking order theory

The pecking order theory was first introduced in 1961 by Donaldson but was later altered and modified by Myers and Majluf in 1984. The idea addresses whether a corporation prefers internal or external finance when it need more funding. The pecking order theory of Myers and Majluf (1984) analysis a firms with assets in place and growth opportunity requiring additional financing. Because investors do not know the true value of either the current assets or the new opportunity, they made the assumption that the financial markets were ideal. Therefore, investors can not precisely value the security issued to finance the new investment. Myers and Majluf (1984) assumed that managers act in the interest of existing shareholders and refuse to issue undervalued shares unless the transfers from old to new stockholders is more than offset by the net present value of the growth opportunity, this leads to a pooling equilibrium in which firms can issue shares , but only at a market-down price this is because of the information investors infer from the

decision to issue, it turns out that the bad news about the value of assets in place always outweighs the good.

The pecking order theory of capital structures states that first firms prefer internal to external finance. That is information asymmetries are assumed relevant only for external financing. Second dividends are sticky so that dividends cuts are not used to finance capital expenditures and so that changes in cash requirements are not soaked up in short run dividends changes. In other words, change in net cash show up as changes in external financing. Thirdly if external funds are required for capital investment, firms will issue the safest security primarily that is debt equity. If internally generated cash flow exceeds capital investments. The surplus is used to pay down debt rather than repurchasing and retiring equity as the retirement for external finance increases the firm will work down the pecking order from safe to riskier debt, perhaps to convertible securities or preferred stock and finally to equity as the a last resort . Lastly each firm's debt ratio therefore reflects its cumulative requirements for external financing. The preference of public corporations for internal financing and the relative in frequencies of stock issues by established firms, have long been attributed to the separation of ownership and control and the and managers' ambition to escape the constraints of the capital markets. For example Baumal (1965,p.70) argued that a company which makes no direct use of the stock market as a source of capital can, apparently proceed to make its decisions confident in its immunity from punishment according to the impersonal mechanism of the stock exchange.

Myers and Majluf (1984) suggests a different explanation ; managers who maximize market value will avoid external equity financing if they have better information than outside investors and the investors are rational. Furthermore according to Ehrhardt & Brigham (2011), the firm first raises capital internally by reinvesting its net income and selling its short- term marketable securities. The company will issue debt and maybe preferred stock once that source of funding is depleted. The Company will only in extreme cases issue Common Stock. A hypothesis that, given all other factors being equal, businesses looking to finance a new project or product have a hierarchy of preferred financing options that shifts from the most preferred to the least preferred. The hierarchy is stated to go as follows: internal funding, debt issuance, debt-equity hybrid issuance, and equity issuance. Internal funding is simply paying for a project or product out of your own pocket. The reasons why firms have that order of preference have to do with asymmetric

information. Because managers have access to more information on the state of the company and its performance than shareholders, there is an information gap. The result is therefore that the shareholders will base their belief on the firm's future on the manager's actions.

The manager's activities are thought to convey information about the company's state. Malm and Roslund (2013) contend that while issuing debt does not convey any message, doing so implies that the shares are overvalued. Therefore, issuing debt is preferred to issuing equity. According to Olokoyo (2012), underpricing may be so severe that new investors capture more than the net present value of the new project, resulting in a net loss to existing shareholders, if corporations are compelled to finance new projects by issuing shares. Managers will therefore be reluctant to issue equity if they believe the market has undervalued it. Investors are aware that managers will be reluctant to issue new shares when it is priced too low. As a result, managers and investors both respond in accordance with the information at hand. Based on this argument, if managers tend to issue undervalued equity (low priced equity). The shareholders' benefits and wealth will be used to offset the wealth transfer to the investors. In this situation, according to Al-tally (2014), internal funds and debt will be preferred to equity.

2.1.4 Agency cost theory

If management and stockholders have distinct goals, agency issues may occur. These conflicts are more likely to occur when the firm's managers have excessive financial resources at their disposal. Optimizing stock prices, in line Ehrhardt & Brigham's (2011) analysis. Costs incurred by agencies basically as a result of conflicts of interest. Two types of conflicts were identified by (Olokoyo,2012; Niu,2008): first is the conflicts between shareholders and managers arising from the situation of managers holding less than 100% of the residual claim and the second is the conflict between debt holders and equity holders arising from the debt contract that make equity holders invest sub optimally. In order to prevent this situation, principal would always choose to add additional clause in contract or take measures to monitor agency, which will definitely increase the relevant cost. However, the theory suggests that choosing best/optimal capital structure may mitigate agency conflicts and decrease agency cost. Therefore, a high leverage to debt ratio, in accordance with the idea, aids a firm in lowering agency costs and minimizing agency conflicts. According to (Gansuwan & Önel, 2012), this debt ratio also encourages managers to act more in the interests of shareholders. As a result, the firm's value increases. In

addition, the optimal capital structure is minimizing the agency costs of monitoring managers and their risk-aversion is sometimes exacerbated by compensation structures as managers are only rewarded for success, and there are penalties for failure (Gangeni, 2006). In situations like this, the managers have a moral dilemma in that they tend to prioritize their own needs ahead of those of the shareholders. Agency costs would be reduced if the firm paid higher dividends and therefore the managers would operate more transparently as they would have to source funding from the capital markets on a regular basis (Gangeni, 2006). According to Ehrhardt & Brigham (2011), firms can reduce excess cash flow in a variety of ways. One strategy is to return some of it to shareholders by increasing dividends or repurchasing stock. The manager's acts according to their objectives at zero cost. Monitoring costs, control costs and agency costs are acritical issue in the relationship between firm owners and suppliers of external financing (Romano et al 2001).

Cash pay outs that reduce retained earnings limit a manager's control and thus reduce the power that a manager possesses. This in turn, creates incentives for managers to invest free cash flows in new projects rather than payout dividends to shareholders (Jensen, 1986). Jensen further states the debit creation can be used as a control mechanisms by shareholders for reducing agency costs associated with the owner- manager's relationships and further that "by issuing debt in exchange for stock". Managers are bonding their promise to pay out future cash flows in a way that cannot be accomplish by simple dividend increases (Jensen, 1986.p.324). Substituting dividends for debt therefore allows a manager to internally generated funds for investment and growth strategies rather than a dividend payout. Jensens reasoning therefore supports the pecking order in general.

2.2 Overview of capital structure and component of capital structure

2.2.1 Overview of capital structure decisions

Capital structure refers to the different options used by a firm in financing its assets (Mudugu, 2013). A firm can go for different levels or mix of debit, equity, or other financial instruments. The foundation for theories and research focus on the subject of capital structure began with the introduction of Modigliani and Miller (M&M) which is considered to have created the turning point for modern corporate finance theory. The theory provides insight in to a firm's capital structure decision in a capital market free of taxes, transaction costs and other frictions.

Most hypothesis, including the pecking order theory, agency theory, and trade-off theory, have endeavored to explain capital structure by including frictions ignored in Modigliani and Miller's (1958) work that the original Modigiliani and Miller framework misses. According to Myers (2001) there is no universal theory of the debit- equity choice and no reason to expect one. However there are several useful theories as identified earlier each of which helps to understand the debt-equity structure that firms choose two categories of hypothesis can be distinguished. Either they predict the existence of optimal debt-equity ratio for each firm (so called static tradeoff theory models) or they declare that there are no well-defined target capital structures (pecking order hypothesis).

Static tradeoff models understand the optimal capital structure is achieved when the marginal present value of the tax shield on additional debt is equal to the marginal present value of the cost of financial distress on additional debt. On the other hand, the pecking order theory suggests that there is no optimal capital structures but firms ration between internal financing (retained earnings) to external funds depending on the perceived degree of information asymmetry in the finance environment is just one of many variables that could have an impact on a company's financial structure.. For example Salawle (2007) identifies factors such as ownership structure and management control, growth, profitability, issuing cost and tax issues associated with debt as the major influencing firm’s capital structures. Bevan and Danbolt (2001) also highlights company size, profitability, tangibility, growth opportunity, non-debt tax shields and dividend as possible determinants of capital structure choice.

An appropriate capital structure is important not only of the need to survive and growth or maximizing returns of business organizations but also the impact of decisions on firm’s ability to deal with its competitive environment (Mathewos, 2016).

The equity and liability sides of the balance sheet show the many sources that make up a company's capital structure. According to Huang and Vu Thi (2003), a company has three basic financial sources, often known as capital components. The first one is at their disposal to fund new investment opportunities, it includes the use of retained earnings (internal equity), the second one is issuing new shares (external equity) and the last one but not the least is borrowing money

through debt instruments (debt capital). These sources financing constituent the capital structure of a firm and also reflect the ownership structure of the firm.

According to Brigham and Daves (2004) absolutely nothing is more important to a new business than raising capital that is the way that the money can be raised and these money have an enormous impact on the success of the business. This argument may be applicable to all business and not only to a new business. How the firm chooses the combination of debt and equity in their capital structure depends on various factors such as the characteristics of the firm, the economy and the perceptions & objectives of the managers. Karadeniz, Kander, Balcilar and Onal (2009) notes that management's first priority is to evaluate the various costs and benefits associated with the use of both debt and equity. So management's will base their decisions with regard to the combination of debit and equity in relation to various costs and benefits. According to these researchers, management will be able to setup an optimal capital structure, which can maximize the value of the firm. This is however the only one side of the debate on capital structures.

2.2.2 Equity financing

According to Sibilkov (2009) equity enables the firm to obtain funds without incurring debit. This means that the fund obtained through equity do not have to be repaid at a particular time. The investor who purchase shares in the firm hope to reclaim their investments out of future profits. The shareholders have the privilege to share the profits of the firm in the form of dividends or future capital gains. However if the firm suffers loss then the shareholders have limited liability, which means that the only loss they face is the amount that they had invested in the firm.

According to Joseph (2011) equity has the following characteristics. Equity has a residual return, the firm will pay shareholders after it pays other creditors, In case of bankruptcy or liquidation of the firm shareholders are the last to receive their money back, the firm is not obligated to pay dividends and the funds invested by shareholders have no term to be received back from the firm. There are two kinds of equity; internal equity and external equity (Myers, 1984). Internal equity refers to the retained earnings of a firm which forms parts of the firms distributable reserves, when the income statement's distributable profit figure is calculated.. The firms has to decide what proportion of that profit will be paid out as dividend to the ordinary shareholders, the remaining amount represents the retained earnings and this amount will be carried over to the

firms distributed reserves in the balance sheet. The retained earning therefore represents the amount that is reinvested back in to the firm. External equity refers to outside capital which is obtained through the issuing new shares. It generally consists of ordinary shares capital and preference share capital. When internal equity (retained earnings) is insufficient for the desired investment opportunity, a company must raise external equity (Graham and Harvey, 2001).

According to Narayanan (2008), when a firm raises too much capital through equity issues, it could be interpreted as a signal to the market that it does not have sufficient reserves cash flows and this could result in the undervaluation of the firms share. When investments are financed with external equity, the shares prices of the firms sometimes fall. As a result, it is preferable to accumulate reserves so that a larger share of capital requirements can be met internally.

2.2.3 Debt Financing

Debit financing or financial leverage is a term used to explain the usage of debt to finance the operations and acquire additional funds in order to enhance the expected return on equity. It is measured by dividing total debt by total assets or total debt by total debt and equity According to Joseph (2011) a financial debt has the following characteristics. It is regulated by a contract, the firm and the creditor define dates of paying back principal and interest charges, the creditor receives their money without mattering if the firm has earning or not, the creditor has priority up on the payment of distributed dividends or net income Creditors require a warranty, usually based on tangible assets. Another requirement is to have consigners to insure the debt payment.

Highly leveraged firms are those using more amount of debt than equity amount. Among debit financing types the safest type is generally considered long-term debt because the company has years, if not decades, to come up with the principal, while paying interest. According to Nawaz, et al. (2011), only the interim Debenture capital, which is a component of borrowed capital in a capital structure, is held by the company's creditors. Debentures of several forms are issued for the convenience of investors. Also, organizations can obtain long-term and medium-term loans from banks and financial institutions. Public deposits, which are defined as any funds received by a nonbanking corporation in the form of a deposit or loan from members of the public, including employees, clients, and owners of the company, other than in the form of shares and debentures, can be used to finance debt. When a firm decides to use debt financing for its operations it’s faced

with a financial risk and it's referred to as a levered firm. Financial risk was described by Ehrhardt & Brigham (2011) as the additional risk that the decision to use debt financing put on the common stockholders. Financial risk is the probability that the earnings of the firm will not be as projected because of the method of financing. Also, the financial risk arises because debt has a fixed financing obligation usually in the form of interest which must be met when the obligation falls due before the shareholders can share in the retained earnings. The level of debt (financial leverage) that is acceptable for one industry or line of business can be highly risky in another so generally, the presence of fixed cost financial leverage may increase the unpredictability of cash flows and, consequently, net income, particularly when operating income is declining. Hence, leverage increases the company's risk of bankruptcy or face financial risks. Financial risk is an additional risk placed on common stock holders as a result of the decision to finance using debt. financing risk arises because debt has a fixed financing obligation usually in the form of interest which must be met when the obligation falls due before the shareholders can share in the retained earnings (Brigham, E. F., & Houston, J. F. , 2007).

The value of a company should, theoretically, take the shape of a concave function as debt levels rise. This implies that the firm, following the tradeoff theory, should have an optimal leverage. Over leverage can hurt firm's performance by increasing bankruptcy risk, increasing the cost of borrowing and financial distress. In other study titled' 'firm crash risk, information environment and speed of leverage adjustment'', the authors demonstrate crash risk exposure is positive related with the magnitude of overleverage (Zhe, Li, and Yu 2015).additional research has also pointed out five disadvantages of being over levered, which include; limited growth potential, losing assets, inability to increase debt and inability to attract equity (Garcia, 2014). All things considered, a company with excessive debt should have inferior profitability. On the other hand, an under levered firm can forego tax benefits. Cheng and Tzeng (2011) point out the total agency cost can be decreased by applying the appropriate leverage ratio. Agency costs can be very large and debt works as a mechanism to minimize this cost. This implies that under levered firm also should have lower profitability.

2.2.4 Cost of capital

The expected return on a portfolio of all the firm's outstanding debt and equity securities is known as the company cost of capital. It is the proper discount rate for the firm's average-risk projects since it represents the opportunity cost of capital for investing in all of the firm's assets. The corporate cost of capital is simply the anticipated rate of return on the company's stock if there is no outstanding debt for the company. Because the choice of financial structure influences the cost of capital, companies can affect it in a variety of ways (Wald, 1999), further noted that investors providing equity capital being the residual claimants of a company's net cash flows, owners were in a riskier position compared to those supplying debt. Owners of a business receive returns through dividend and increase in the value if the firms' assets often reflected in stock price appreciation. On the other hand, debt holders receive interest payments prior to dividend distribution.

According to Bader (2018) capital consists of two components, one is debt and the other is equity. If a firm finances its operations with debt, it is borrowing money from a lender for a certain period of time with a promise to pay the money back with its interest. In exchange, the lender gets paid interest on the loan. With equity financing the shareholders buy shares in the company, they become owners and in return they receive apportion of a firm profits. In general cost of capital represents the different costs attached to the different sources of financing obtained by organizations.

2.2.5 Financial performance

Strength of financial position of an organization is called financial performance.it is measured by how better off the shareholder is at the end of a period, than it was at the beginning and this can be determined using ratios derived from financial statements; mainly the balance sheet and income statement, or using data on stock market prices (Berger and Patti, 2002).to assess the business financial performance of a company profitability ratio is very important because it measures firms ability to generate profits. Which is the overall efficiency and performance of the company. So company must aware that profitability is the first thing to attract investors (Dao, 2016).the amount of net income is determinant of the financial performance success in relation with its investment. Business Profitability is the main objective and assurance of long term

survival of the firm. So it is very important for companies to measure current and past profitability and to projects future profitability (Khan and Safiudin, 2016). in addition to this revenues are generated by the efficient use of accompanies resources. Decision made regarding business development, managerial control, and asset acquisition will be guided by the analysis of financial performance. Performance evaluation also reflects accompanies 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 &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.” Some 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 Review of empirical studies

As discussed on the previous parts the international scholar studies of capital structures dates back to 1958s MM studies. At the moment they stated that no matter whether afirm have to be financed through debt or equity investments. This is commonly known as the capital structure irrelevance theory, then after a few years MM (1963) point out that if companies deduct debt interest before arriving at taxable profits, it was determined that a company should finance entirely using debt. Since then there have been vast amounts of empirical studies on this topic; expressing different and conflicting views as to what really determines optimal capital structure and its impact on firm performance. Accordingly, the subsequent sections deal with these studies at international and national level. Some of them have got a positive relation while others found a negative relationship between capital structure variables and firm performance.

2.3.1 Empirical reviews studied in foreign countries

Abiodun (2014) employs a triangulation approach to assessing the relationship between capital structure and firms' financial performance in Nigeria. The researcher takes the data of 31 manufacturing firms with audited financial statements for the periods 1999 and 2012. The article discovered a significant curvilinear relationship between ROA and leverage, also known as the debt-to-equity ratio. The claim made in the paper that large organizations are more likely to maintain superior performance than middle-sized firms under the same level of debt ratio—has been debunked.

Hajar et al. (2023) study aims to determine and analyze: the effects of capital structures (the Debt Equity Ratio and Fixed Asset Ratio, the Debt Equity Ratio, Fixed Asset Ratio) on the Return of Assets in the Food and Beverage sub-sector manufacturing companies of the Indonesia Stock Exchange. The researcher uses historical data taken during the 2016-2020 period. The type of data

used in this research is secondary data the research sample is 20 companies which are determined based on purposive sampling. Data analysis uses panel data regression analysis. The study's findings show that: (1) Fixed asset ratio and debt equity ratio factors have a simultaneous positive and significant impact on return on assets in the Food and Beverage sub-sector manufacturing companies listed on the Indonesia Stock Exchange (2) The Fixed Asset Ratio partially influences the Return on Assets in manufacturing firms in the Food and Beverage sub-sector listed on the Indonesia Stock Exchange in a positive and significant way.

Hasan et al. (2014) examined the impact of capital structure on the operating results of 36 Bangladeshi companies listed on the Dhaka Stock Exchange between 2007 and 2012. The researcher has used four performance measures; (Earning per Share) EPS, ROE,

ROA and Tobin's Q; as dependent variables and three capital structure ratios; short term debit to asset ratio (STDTA),long term debit to asset ratio(LTDTA) and total debit to asset ratio(TDTA); as independent variables. The article discovered that EPS is strongly positively correlated with STDTA using the pooling panel data regression approach.

Twairesh (2014) examines how capital structure affects non-financial companies operating in Saudi Arabia, one of the world's growing or transitional economies. Panel econometric technique called fixed effect regression is used for the period between 2004 -2012. Sample data includes 74 companies. The study examines the connection between operating performance as assessed by ROA and ROE and capital structure proxies, such as STDTA, LTDTA, and TDTA. The size of the business served as a control variable. The study finds that STDTA, LTDTA and TDTA have significant positive impacts on ROA. While only LTDTA has significant positive impacts on ROE. Firm size has significant impacts on firm performance when ROA is a dependent variable and no impact on firm performance when ROA is dependent variable.

Taani (2013) investigates how capital structure affects Jordanian banks' performance. The annual financial statements of 12 commercial banks listed on Amman Stock Exchange were used for this study which covers a period of 5 years from 2007-2011. Multiple regressions were applied on performance indicators such as Net Profit, Return on Capital Employed, ROE and Net Interest Margin as well as Total Debt to Total Funds and Capital structure factors include the ratio of total debt to total equity. To estimate the connection between capital structure and banking

performance, several regression models are used. The results show that bank performance is to be significantly and positively associated with TD; while TD is found to be insignificant in determining ROE in the banking industry of Jordan.

A study conducted by Endri, E. et al (2021) examined forty-two listed mining companies on the Indonesian stock exchange. To determine the capital structure, DER, DAR, LDTE, LDTC, and growth are employed as independent variables. ROA and EPS were positively but insignificantly affected by DER, but ROE was significantly positively affected by DAR; ROA and EPS were significantly positively affected by LDTC. ROE and EPS were insignificantly positively affected by LDTC. ROE and EPS were severely impacted, however ROA was not significantly affected. In terms of ROA, ROE, and EPS, growth has a significant positive impact.

Goyal (2013) seeks to study the impact of capital structure on profitability of public sector banks in India listed on national stock exchange during 2008 to 2012. Regression Analysis has been used for establishing relationship between ROE, ROA & EPS with capital structure. The findings reveal positive relationship of STDTA with profitability as measured by ROE, ROA & EPS. He (2013) encompasses 2 developed countries (Germany and Sweden) and a developing country (China) to test the impact from capital structure to firm performance of period 2003- 2012 with more than 1200 listed companies in Germany and Sweden. The result shows that capital structure has a significant positive effect on 2 European countries before financial crisis happened in 2008. Umar et al. (2012) (2012) investigates how the capital structure of Pakistan's top 100 companies on the Karachi Stock Exchange over a four-year period affected their financial performance from 2006 - 2009. Exponential generalized least square regression is used to test the relationship. The results show that positive relationship is found with LTDTA where the relationship is insignificant with, TDTA. The results also indicate that ROE has an insignificant impact on STDTA and TDTA but a positive relationship exists with LTDTA.

There are two issues that Ananiadis and Varsakelis (2008) address. First, does performance depend on capital structure in the same manner that it does in developed economies? Second, how, and in what situations, does the company's short-term financial policy impact performance? They test for these issues by utilizing a panel data analysis on information from the Athens Stock Exchange. This study examined the connection between capital structure, short-term financial

management, and profitability using current data. 130 industrial companies that were listed on the Athens Stock Exchange between 1995 and 2000 were the subject of the analysis. The returns on assets are influenced favorably by the management of net. The net-working capital management has a positive impact on the returns on assets. Financial leverage intensifies this positive effect. The management of inventory appears to be a key factor in the explanation of profitability, to sum up. According to empirical results, excessive inventories turnover may result in reduced sales and, as a result, decreased profitability.

San and Heng (2011) look into the connection between a company's capital structure and its performance both before and after the 2007 financial crisis. This study focuses on construction firms that were listed on Bursa Malaysia's Main Board between 2005 and 2008. Based on the amount of paid-up capital, all 49 construction enterprises are categorized into big, medium, and small sizes. Return on capital and Long-term Debt to Capital has a positive association for large organizations, but EPS and Debt to Capital have a negative relationship. In the interim, only Operating Margin with Long- term Debt to Common Equity has a positive relationship in medium companies and EPS with Debt to Capital has a negative relationship in small companies. In conclusion, the results show that capital structure and corporation performance in particular proxies have a link.

Australian Authorized Deposit-Taking Institutions' capital structure and company performance are the subject of Skopljak and Luo's(2012) study. The results demonstrate a substantial correlation between the capital structure of Australian authorized deposit taking institutions and firm performance. At relatively low levels of leverage, increasing debt results in better bank performance through higher profit efficiency, whereas at relatively high levels of leverage, increasing debt results in worse bank performance through lower profit efficiency. Hajar et al. (2023) study aims to determine and analyze: the effects of capital structures (the Debt Equity Ratio and Fixed Asset Ratio, the Debt Equity Ratio, Fixed Asset Ratio) on the Return of Assets in the Food and Beverage subsector manufacturing companies of the Indonesia Stock Exchange. The researcher uses historical data taken during the 2016-2020 period. The type of data used in this research is secondary data the research sample is 20 companies which are insignificant effect on the Return on Assets in the Food and Beverage sub-sector

According to Hasan et al. (2014), 36 Bangladeshi companies registered on the Dhaka Stock Exchange between 2007 and 2012 were examined to determine the impact of capital structure on business performance.. The researcher has used four performance measures; (Earning per Share) EPS, ROE, ROA and Tobin's Q; as dependent variables and three capital structure ratios; short term debit to asset ratio (STDTA),long term debit to asset ratio(LTDTA) and total debit to asset ratio(TDTA); as independent variables. Using pooling panel data regression method, the paper found that, there is no statistically significant relation exists between capital structure and firm's performance as measured by ROE and Tobin's Q.

Seetanah et al. (2014) seek to empirically assess the impact of capital structure on performance of Mauritian firms listed on the Official Market of the Stock Exchange of Mauritius for the period 2005-2011. The study uses static and dynamic panel data approaches to pinpoint the factors that affect how well a company performs. the results indicate that the main determinants of firm performance are capital structure, firm size, business risk, Mauritius Rupee/ Euro exchange rate and Mauritius Rupee /United State Dollar exchange rate. Growth prospects, free cash flow, the firm's age, and the price of oil are determined to have little bearing on the performance of the company. Firm performance is observed to be negatively related to capital structure indicating that firms with lower leverage have better performance thereby supporting the pecking order theory.

A study conducted by Endri, E. et al (2021) examined forty-two listed mining companies on the Indonesian stock exchange the capital structure is established using DER, DAR, LDTE, LDC, and growth as independent variables. ROE was negatively impacted, ROA and EPS were significantly negatively affected by DAR. ROE was significantly negatively affected by LDTC. Çekrezi (2013) examines several determinants of capital structure on firm's choices of financial leverage. The capital structure is established using DER, DAR, LDTE, LD The study examined four dependent variables, including size, liquidity, tangibility, and profitability (as determined by ROA), along with three capital structure metrics, including STDTA, LTDTA, and TDTA. For a sample of 65 non-listed companies that have operated in Albania between the years of 2008 and 2011, the investigation makes use of panel data technique. The findings showed a strong negative correlation between ROA and ROI.

Mohammad et al, (2012) seeks to extend, Abor's (2005), and Gill, et al., (2011) findings regarding the effect of capital structure on profitability by examining the effect of capital structure on profitability of the industrial companies listed on Amman Stock Exchange during a six year period (2004-2009). Correlations and multiple regression analysis were used to arrive at the results, which show a pronounced inverse relationship between debt and profitability. This finding was supported by related investigations by Winston Pontoh (2013), Koech (2013), Singh (2013), and Opoku et al. (2014). On 247 enterprises between 2009 and 2011, the earlier study employed debt equity and debt asset ratio as indices of capital structure, with growth, size, tangibility, and degree of operating leverage serving as its determinants. They employed return on asset and return on equity to determine profitability. This study used route analysis to discover that size was negatively significant to DAR, DOL was negatively significant to DER, DAR was negatively significant to ROA, and DER was negatively significant to ROE.

Abbadi and Abu-Rub (2012) develop a model to assess the impact of capital structure on Palestinian financial institutions' bank efficiency as assessed by ROE, ROA, and total deposit to assets, total loans to assets and total loans to deposits were used to measure capital structure. The paper found that leverage has a negative effect on bank profits, an increase in each ROA and Total Deposit to Assets increase bank efficiency. The paper also tested the effect of the above variables on bank market value measured by Tobin's Q. The study concluded that while a rise in Total Deposit to Assets and ROA both boost bank efficiency, leverage has a detrimental impact on bank profitability. The article also examined how the aforementioned factors affected Tobin's Q, a measure of bank market value. The study discovered that leverage has a detrimental impact on a bank's market value and that market value and ROA and the proportion of bank deposits to total deposits are strongly correlated. Chao (2012) examined how the capital structure of Taiwan-listed information-electronics businesses affected organizational performance, with corporate governance acting as the moderator. While convenience sampling was used to yield knowledge from the population, the linear Structural Equation Modeling was adopted to verify the goodness-of-fit effects among the overall model, structural model and measurement model. The results of this study demonstrate that the capital structure and corporate governance at Taiwan-listed information technology businesses both have a strong interaction impact on organizational performance. Chinaemerem and Anthony (2012) use a sample of 30 non-financial companies

listed on the Nigerian Stock Exchange over a seven-year period, from 2004 to 2010, to investigate the effect of capital structure on financial performance of Nigerian businesses. Ordinary least squares (OLS) was used as an estimation technique to create panel data for the chosen companies. The outcome demonstrates that a company's capital structure considerably affects its financial metrics, ROA and ROE. The analysis of these results shows coherence with earlier empirical studies and offers proof for the Agency cost theory. Lew (2012) examines capital structure theories and debt level determinants by uses 4,598 sample companies from 11 countries and 27 industries over a 20 year period. The sample examines 11 different characteristics, which include firm size, debt level, and bankruptcy probability. There are five main findings. First, companies with stable finances tend to issue more debt. Second, they favor moderate debt levels, which lower the likelihood that they will file for bankruptcy. They also attempt to take advantage of undervalued stock price chances by issuing stocks to boost cash inflows. Third, in terms of capital structure adjustment, bankruptcy expenses have a bigger impact than transaction costs. Fourth, businesses continuously reduce their levels of leverage during the sample period. Fifth, firm's characteristics and macro-economic factors affect their capital structure.

The effect of capital structure on the financial performance of companies listed on the Tehran Stock Exchange is studied by Pouraghajan & Malekian (2012). In order to achieve this, they examined a sample of 400 businesses organized into 12 industry groupings between the years of 2006 and 2010. In this study, ROA and ROE variables were utilized to gauge businesses' financial success. According to the findings, asset turnover, company size, asset tangibility ratio, and growth opportunities have a substantial positive link with financial performance metrics and a significant negative relationship with debt ratio. Additionally, research findings indicate that management can raise shareholder wealth by increasing the company's profitability and, consequently, the quantity of the company's financial performance indicators, by lowering the debt ratio.

Australian Authorized Deposit-Taking Institutions' capital structure and company performance are the subject of Skopljak and Luo's (2012) study. Findings show a significant relationship between capital structure and firm performance of Australian Authorized Deposit Taking Institutions. At relatively low levels of leverage, increasing debt results in better bank

performance through higher profit efficiency, whereas at relatively high levels of leverage, increasing debt results in worse bank performance through lower profit efficiency.

In Pakistan, the top 100 consecutive companies listed on the Karachi Stock Exchange were studied by Umar et al. (2012) to determine the effect of capital structure on firms' financial performance over a four-year period, from 2006 to 2009. To examine the association, exponential generalized least squares regression is employed. The findings demonstrate that the three capital structure variables STDTA, LTDTA, and TDTA have adverse effects on EBIT, ROA, EPS, and net profit margin, whereas Price Earnings Ratio exhibits a negative correlation with STDTA.

The relationship between capital structure and debt lifetime among PEX listed companies is investigated by Abu Mouamer (2011). In this study, 15 businesses are examined during a five year period (2000-2004). The research Profitability, leverage ratios (TD, STD, and LTD), liquidity, age, asset structure, business size, and sales growth are some of the characteristics utilized in the analysis. The data's panel nature makes panel data methodology possible the study has shown that the service companies have the highest TD ratio (53.69 percent), followed by industrial companies (50.86 percent), trade companies (34.11 percent) and agriculture companies (24.02 percent). The one-way analysis of variance (ANOVA) shows no significant difference in the use of debt, neither total, LTD or STD among companies in the 4 sectors. Additionally, ANOVA results show that the sample companies' differences in terms of growth prospects, size, age, tangibility, and liquidity are not statistically significant. According to the correlation research, there is no significant association between long- term debt and STD and age, growth, liquidity, tangibility, and size in the country. However, TD is favorably and significantly associated to tangibility.

Using data from Turkey, Muzir (2011) examines and evaluates the connections between firm size, capital structure, and financial performance. Additionally, it seeks to compare and debate the three main capital structure theories of relevance theory, trade- off theory, and pecking order theory. A data set of the financial statements for at least 5 years from 1994-2003 of 114 firms listed at the Istanbul Stock Exchange is used in modeling insolvency risk using a binary logistic regression analysis on particular financial ratios. According to how size expansion is financed, the results provide some strong evidence indicating that the impact of business size on financial performance and sustainability may vary. The Trade-off Theory is preferred above the

alternatives since it has been demonstrated that asset expansions financed with debt expose investors to more risk, especially during economic downturns.

San and Heng (2011) look into the connection between a company's capital structure and its performance both before and after the 2007 financial crisis. This study focuses on construction firms that were listed on Bursa Malaysia's Main Board between 2005 and 2008. Based on the amount of paid-up capital, all 49 construction enterprises are categorized into big, medium, and small sizes. Returning to large corporations have a positive relationship whereas EPS with Debt to Capital is negatively related. In the interim, only Operating Margin with Long- term Debt to Common Equity has a positive relationship in medium companies and EPS with Debt to Capital has a negative relationship in small companies. In conclusion, the results show that capital structure and corporation performance in particular proxies have a link.

Three factors that affect the financial success of the companies listed on the PEX are the subject of an investigation by Daraghma and Alsinawi (2010). The three variables are aboard of directors' characteristics (size and composition), management ownership, and capital structure. Study employs various statistical techniques to examine the hypotheses (descriptive analysis, and ordinary least square; simple and multiple regressions) to study 28 corporations 4 years 2005-2008. The results of the study indicate that the CEO- Chairman separation does not have any significant impact while the CEO-Chairman duality has a significant impact on the financial performance. Additionally, the paper finds out that the board size has a significant negative impact on the financial performance. In addition, this paper concludes a positive impact of management ownership on the financial performance. Finally, they draw the conclusion that the profitability of Palestinian firms is unaffected by debt funding.

2.3.2 Empirical review from Ethiopia

Several studies conducted in Ethiopia, including Melese, A. (2013), Endale, T. (2015), Aragie et al. (2015), Tufa, F. B. (2016), Kifle, A. (2016), Birassa, F. (2016), Liku, Y. (2017), Adamu, Y. (2018), Telila, M. (2018), and Halake, J. (2020), have examined the effect of capital Structure on firms' financial performance.

Melese, A. (2013) conducted a study assessing the effect of capital structure on the financial performance of Ethiopia's metal and engineering industry. The study used secondary data collected from annual financial reports for the years 2007 to 2012. Return on Equity (ROE) was employed as the performance measure, while total debt ratio, short-term debt ratio, and long-term debt ratio were used as capital structure variables. Additionally, firm size, asset tangibility, and asset turnover were included as control variables. Panel data analysis was applied, using six years of data from 10 selected companies out of a population of 78.

The findings showed a positive effect 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 industry, although the long-term debt ratio was found to be insignificant. The results of all capital structure measures supported the argument of trade-off capital structure theories. The researcher recommended that companies in Ethiopia's metal and engineering industry should determine their optimal capital structure, going beyond just recognizing the positive impact of debt.

Endale, T. (2015) assessed impact of working capital management and firm‘s performance in the case of Breweries companies operated in Ethiopia. The study used secondary data sources obtained from audited financial statements of two Brewery companies registered and work in Ethiopia. The audited financial statements from the firms were analyzed to identify the effect of cash conversion cycle, inventory conversion period, daily sales outstanding and daily payables outstanding on the gross operating profit and analyzing the raw data by using SPSS Software. Estimation equation by both correlation analysis and pooled panel data regression models of cross- sectional and time series data were used for analysis A study result revealed that there is statistically insignificant negative relationship between inventory conversion period, daily sales outstanding, daily payable outstanding and the profitability of the firms. Unlike the above findings, there is statistically insignificant positive relationship between cash conversion cycle and profitability. According to the results of study, it is recommended that breweries’ companies can enhance their profitability by maintaining an optimal level of working capital. Hence the study concluded that there is no significant interaction between and no strong effect or impact of working capital management on profitability of Breweries companies in Ethiopia.

Aragie et al. (2015) assess the relationship between capital structure and financial performance of commercial banks in Ethiopia. uses secondary panel data collected from annual reports of eight sample commercial banks for the period covered 2000- 2012.on their studies return on asset, return on equity and net profit margin as a dependent variables to measure financial performance and total debt to total asset and total debt to total equity used as a capital structure variables and firm's size also used as a control variable. The finding were shows that leverage has a positive effect on the financial performance of commercial banks in Ethiopia when performance measured by return on equity. In contrary to this finding, another similar analysis shows that leverage has a significant negative effect on performance of commercial banks in Ethiopia when performance is measured by return on asset and net profit margin. These contradict finding support both trade off theory and pecking order theory of capital structure. Therefore, the researchers suggest that Ethiopia banking industry should make capital structure at optimal.

Kifle, A. (2016) conduct an explanatory type of research design to assess the effect of capital structure on financial performance of Ethiopian cement companies. Secondary data of annual reports were collected from the sample of 8 cement companies in Ethiopia during for the period of 2010-2014. A capital structure which is measured by long term debt to equity ratio and financial performance measured by return on asset (ROA) and return on equity (ROE), several control variables were in use: size, tangibility, growth opportunity, capital adequacy, liquidity, business risk and gross domestic product (GDP). The finding or the results of random effect multiple regressions shows that capital structure has significant positive relationship with financial performance when capital structure and financial performance is measured by long term debt to equity ratio and return on asset (ROA) respectively. However, the study also get capital structure also has significant negative relationship with financial performance when capital structure and financial performance is measured by long term debt to equity ratio and return on equity (ROE) respectively.

Tufa, F. B. (2016) also tries to analyze the impact of corporate capital structure on profitability based on the data from manufacturing firms in Ethiopia. The researcher applied quantitative methods of research design and secondary data were collected by combining cross-sectional and time series data by review of annual financial reports for the period of 2010-2014. Population of

the study was large tax payers manufacturing share companies and from them 34 samples were selected using random sampling techniques. Capital structure variables in use were interest coverage ratio (ICR), debt ratio (DR), debt to equity ratio (DE), long term debt to capitalization ratio (LDCR), short term to liability (SDTL) and long term to total liability (LDTL) and control variables: size (SZ), sales growth rate (SG) and tangibility (TN) and profitability was measured by return on capital employed (ROCE). The finding shows that, a significant positive relationship between capital structure variables (short-term liabilities to total liabilities ratio, long-term debt capitalization ratio and interest coverage ratio) and profitability (ROCE). Based on the research findings pecking order theory would better reflect the current corporate capital structure strategies of large tax payer manufacturing firms in Ethiopia. According to the study, adopting a suitable capital structure mix will boost the profitability of manufacturing companies, and short-term debt has a favorable correlation with financial performance rather than long- term debt.

Another study by Birassa, F. (2016) was about corporate capital structure and its impact on profitability by using panel data regression analysis of manufacturing firms in Ethiopia. Using business level accounting data, the dataset consists of twenty four significant tax payer manufacturing share corporations and spans a five-year period (2010-2014 G.C.). In his study the researcher used return on capital employed as dependent variable, and six proxy for leverage as independent variables interest coverage ratio, debt ratio, debt to equity ratio, long term debt to capitalization ratio, short term debt to total liability, long term debt to total liability, while size of total asset, sales growth rate and tangibility used as control variable. The results show that all the three variables of capital structure, short-term debt to total liability, long-term debt capitalization ratio and interest coverage ratio showed positive and significant impact on profitability. Other constituted variables i.e. Debt ratio and debt to equity ratio were found to have little bearing on the sample firms' profitability. Therefore, no significant linear dependence was detected for debt ratio and debt to equity ratio versus profitability.

Liku, Y. (2017) also tried to identify the effect of capital structure on financial performance of microfinance institutions in Ethiopia. The sample selected was 18 microfinance institutes under category A and B only. Panel data analysis technique was in use and secondary data were collected from the annual reports during the period of 2010-2015. Return on equity (ROE) was

used as a financial performance measure and debt to asset ratio (DTAR), interest coverage ratio and loan to deposit ratio as a capital structure variables and firm size and firm age were control variables. The finding shows that most of the microfinance institutions had employed high leverage and capital structure variables do have a positive relation with financial performance of microfinance institutions in Ethiopia. Additionally the study recommended that microfinance institutions in Ethiopia should employ more debt, which is up to optimal level in to their capital structure, so as to maximize their financial profitability. Adamu, Y. (2018) conducts a research on capital structure and corporate performance of pharmaceutical manufacturing firms of Ethiopia. The study used secondary panel data which consists of time series and cross-sectional data that are extracted from the financial statements of the seven selected pharmaceutical manufacturing firms of Ethiopia covering the years from 2007- 2016. The data is analyzed using interactive econometrics software packages of E-view 9. A capital structure which is measured by long term debt to equity ratio and total debt to asset ratio and corporate performance is measured by return on asset (ROA). Age, size, liquidity and sales growth are used as control variables. The results show that firm leverage measured by long-term to equity ratio has negative and statistically significant relation with return on asset. On the other hand, firm leverage measured by total debt to asset ratio has statistically significant positive relation with return on asset. All control variables have statistically significant relation with return on asset, there are significant positive relationship between age and financial performance of pharmaceutical manufacturing firms, negative relationship between return on asset and firm size on their research shows a statistical significant negative relationship between sales growth and financial performance of Ethiopian pharmaceutical manufacturers.

Telila, M. (2018) assess the effect of capital structure on financial performance of construction companies of Addis Ababa by applying quantitative research approach and explanatory research design. The research was done based on the secondary data of the financial statement of sixteen grade one general construction companies. The data were obtained from ERCA large tax payer's branch office and individual companies. The study also used a panel data of the respective construction companies for covering the period from 2012 to 2017. The dependent variable which represents the profitability of construction companies is measured by return on assets (ROA) and the independent variable which represents the capital structure are short term ratio, long term

ratio, debt to equity ratio, interest coverage ratio, tangibility and firm size. The data is analyzed by using E-views software package. The results of a balanced panel regression model using OLS regression analysis revealed that short term debt had positive and statistically significant effect on financial performance of GCI companies in Addis Ababa. Similarly long term debt had positive and statistically significant effect on financial performance. Furthermore, debt equity had negative and statistically significant effect on financial performance. Interest coverage ratio had positive and statistically significant effect on financial performance. On the other hand firm size had positive and statistically significant effect on financial performance and finally asset tangibility had positive and significant effect on financial performance of GCI companies in Addis Ababa.

Halake, J. (2020) studied the effect of leverage on the profitability of medium tax payers of food and beverage manufacturing companies in Addis Ababa. The study used secondary data sources obtained from audited financial statements of 12 medium tax payers food and beverage manufacturing companies from ERCA operated in Addis Ababa during the period of 2011-2017. A capital structure which is the independent variable has been measured by leverage and profitability measured by return on asset (ROA), additionally several control variables are in use: firm growth, managerial efficiency, capital adequacy and inflation and the collected raw data are presented, interpreted, and analyzed using E-views. The results of the regression shows that there is a negative and highly significant relationship between leverage ratio and profitability, capital intensity and managerial efficiency is positive and statistically highly significant determinant of profitability, there is a positive and insignificant relationship between firm growth and profitability and lastly inflation has negative and insignificant effect on return on assets.

2.3.3 The influence of variables on firm's financial performance

Size and profitability

The size of a firm is one of the most important determining factor of firm's financial performances due to the reason that an economy of scale. Large and famous firms have higher access to the long term capital market than the smaller firms either borrow short term by means of bank loans or issue stocks that is larger firms will get high debt financing than smaller firms. Additionally size could affect debt available to firms due to information asymmetry so that information asymmetry leads firms to prefer debt since equity is likely to be undervalued in the

market. This suggests that larger firms with less information asymmetry will have more debt availability for them (Rao,Al- Yahyee and Syed,2007).

Isak A., Unal E., and Unal Y. (2007) identifying the effect of firm size on profitability of selected manufacturing firms in Turkey; in their study they have been used data of 112 manufacturing firms quoted on the Istanbul stock exchange during between the years 2005-2013. The selected size variables indicates that there is a positive relationship with their profitability.

Niresh A. and Thirunavukkarasu V. (2014) explains the effect of company size on the financial performance of selected manufacturing firms in Srilanka; on their research studies they have been used data of 15 companies listed in Colombo stock exchange from the years 2008 up to 2012. Firm's profitability is indicated by return on assets (ROA), net profits, total assets and total sales have been used as indicators of firm size. Finally their findings show that there is no relationship between firm size and financial performance of listed manufacturing firms i.e. no of any profound impact on profitability.

Meiryani, Oliva, Sudrajat J. and David Z. (2020) conducts a research on the effect of firm size on corporate performance of Indonesia manufacturing sectors; under their study they uses 55 manufacturing sectors listed companies in Indonesia stock exchange during between 2014-2018 research periods and size is calculated from the logarithm of the company's total sales. The results of their finding shows that firm's size has no effect on firm's financial performance which is proxied by return on assets, liquidity and profitability.

Liquidity and performance

Liquidity is measured by a current ratio and it indicates the efficiency of current asset utilization, so its management determines to a great extent the growth and financial performance of firms basically the food and beverage manufacturing firms of a company. More recent studies have confirmed the appearance of a relationship between liquidity and profitability. The study of Kant M. (2018) investigated under the factors influencing the profitability of manufacturing firms listed on the New York stock exchange using ORBIS database on 250 American firms for the year 2012-2017. The results show that liquidity has apositive significant relationship on firm's performance. Thus having a faster inventory turnover and receiving payment quicker results in a

more liquid and more profitable organizations. The above argument also supported by the findings of Trag and Nguyen (2020) & Vijayakumaran (2019).

In contrast other recent studies found that financial performance and liquidity tradeoff relationship shows invalidity of positive connections. For instances (Herdiyana N.,Sumarno A. and Endri E.,2021) studies aims to determine the effects of companies financial performance on the profitability of food and beverage subsector companies listed on the Indonesia Eefek exchange in the period 2015-2018. Profitability ratios are a sign of a company's the technique involves gathering secondary data from the company's IDX financial statements. The result indicates that liquidity or working capital had no significant effect on profitability or financial performance of food and beverage subsector companies listed on IDX. The above argument also consistent with the findings of (Charitou M.S, Elfan M., and Lois P., 2010).that is their research outcome shows that a significant positive relationship does not exist between profitability and liquidity of firms.

Tangibility and financial performance

Asset tangibility is one of the major determinant factors of a company's financial performance and it refers to a firm's investment in tangible asset. The argument that exist in most of the literature positively favor's an existence of a significant positive relationships between asset tangibility and firms financial performance. Tangibility reduces the level of operating costs by making high expenditures on fixed assets. Higher level of asset tangibility results in a reduction of financial distress. Akintaye(2009) suggests and asserts that companies which have more tangible assets are less subject to financial distress. Because those firms are able to maintain more sales revenue by their higher level of production.(Muigai,2016) also encapsulates this relationship by showing those firms with more tangible assets as more efficient firms in production and therefore performing better.

According to static tradeoff theory, tangible assets are guaranteed by the company to borrow money from the banks, which will cut their lending risks. Besides these assets can be collateral to issue bonds in the capital market (Horton, 2017), as a result the more fixed assets are assured ,the more debt the company has and the explanation based on this theory is confirmed by (Kifle, A. 2016) declaring that a positive influence of tangible assets on the financial performance of manufacturing companies.

Sales growth and financial performance

Junnei L. & Edi P. (2019**)** under their study conduct to investigate the factors affecting profitability or return on asset. Especially among Indonesia food and beverage companies using the panel data comprising 48 observations of 12 companies that are listed on the Indonesia stock exchange (IDX) in 2013 to 2016 periods and analyzed by a regression analysis. Finally the study found out that profitability is proved positively influenced by sales growth. The performance of the companies with higher sales growth is better than those which have lower sales growth (Babaloa, 2013), thus the positive value in performance is thought to be result in lower level of financial distress and enhance financial performance of a company. Sales growth of firms most likely will suffer from appearing the debt problem and this will lead to a rise risks accompanying with debt of the firm give up on the profitable investment opportunities. Additionally the firms will depend on the equity sources than dent sources to tolerate financial risks and to invest on opportunities and generally this shows that sales growth effect positively on the financial performance of the companies (Hovakimian, Opler, & Titan, 2001). Many prior empirical studies in the country and abroad proved significant positive relationships between sales growth and financial performance; (Lee and Phan, 2017), (Getahun, 2016), (Tufa, 2016) and (Muritala, 2012).

Age and profitability

According to (Akben-selcuk, 2016), the effect of firm age on financial performance can be observed in different logical and scientific assumptions. The first one about the young firms, This young firm suffers from liability of newness that face high rate of failure of new business due to the reason that new business organizations have a difficult time surviving for the first consecutive years after incorporations. On the other side older firms have long time of existence advantage in terms of performance in contrast to the younger firms that focus on survival and current existence.

In contrary to the above argument organizational life cycle theory by (Dodge F, 1994) states that older organizations or firms in a later stage of the life cycle, tend to experience declining performance. The research study by (Loderer &Waelchli, 2009) validated the life cycle theory by concluding a negative relationship between financial performance rate and the age of the business. This situation is brought on by assets that are losing value and becoming obsolete, which, when

combined with rising costs and slower growth, make profitability difficult. Esperanca et al (2003) based on agency theory that financial managers use along liveness of the firm as a measure of their credit worthiness and firms have built up over the years and which is identified by the market, which has observed their ability to meet their obligation in a timely manner.

Financial managers concerned with a firms age to reduce the risk of investments in order to reduce the debt agency costs. Adamu, Y. (2018) reveals that there is significant positive relationship between firm's age and performance of Ethiopian pharmaceutical manufacturer's companies, With a regression coefficient of 0.308135, t- statistic of 7.839033, and P-value of 0.0000. And it is statistically significant at 1% significant level.

Inflation rates and profitability

Inflation is the major problem for many business sector including manufacturing sectors and a problem of many countries, because the purchasing power of the money declines as the price of goods and services increases. In addition to the above variables the researcher includes it as a macroeconomic factor that determines the performance of manufacturing industries specifically food and beverage companies.

Inflation affects profits by reacting on sales volume through influencing the level of costs and by changing the relationship between cost and prices. Since manufacturing companies generally determine prices by references to cost. Pricing policy becomes particularly important in inflation and the level of profits differs according to whether prices are determined on basis of original costs or current replacement cost (Henning Weber, 2012).the investigation in to the existence and nature of the link between inflation and company's performance has been conducted for a long period of time. Most economists confirm that inflation has a negative effect on company's performance.

A study by Julius W.O, Consolata N. and Reuben R. (2021) on Kenyas manufacturing firm's shows that inflation have a negative low significant effect on the sampled manufacturing firms. Additionally the finding of Amata et al (2016) agree with those of Patjoshi(2013) who conduct a research on effects of inflation on the financial statements on the manufacturing industries on India and the corresponding effect on profitability for the period 2004-2009. Purchasing power method, comparative and common size statement analysis techniques were used. The findings

indicated that arise in inflation level led to a decline in profitability of Indian manufacturing industries. Hindering growth and this finding also agrees with those of Ulusov, Cakir & Ogut (2008) who carried out a study to establish the relationship between inflation and productivity in the Turkish manufacturing sector, the finding or results showed that as inflation increases the productivity of manufacturing sector declines. In contrary to the prior findings a research carried out by Zuhaib, Zulfigar and Nizam Ud D. (2015) looks into how Pakistan's textile sector is performing in relation to macroeconomic factors. Inflation is one of the macroeconomic variables under studied using panel data of fifty different textile firms listed at Karachi stock exchange. This study used return on asset (ROA) and return on equity (ROE) as indicator of the firm's profits and the research result shows that inflation has significant and positive impact on ROA and positively insignificant on ROE but most of the studies argue that inflation have negative impact on the performance of accompanies.

2.3.4 Conclusions and knowledge gap

In Ethiopia, studies on the effect of capital structure on firms' financial performance have yielded varied findings. Some researchers have found a positive relationship between capital structure and financial performance. For example, Tufa (2016) observed a positive relationship when financial performance was measured by ROCE and capital structure by short-term liabilities to total liabilities ratio, long-term debt capitalization ratio, and interest coverage ratio. Similarly, Birassa, F. (2016) found a positive relationship between financial performance (measured by ROCE) and capital structure (measured by short-term debt to total liability, longterm debt capitalization ratio, and interest coverage ratio). Kifle (2016) also noted a positive relationship when financial performance was measured by ROA and capital structure by longterm debt to equity ratio. Adamu, Y. (2018) found a positive effect when financial performance was measured by ROA and capital structure by the total debt to asset ratio. Liku (2017), Melese (2013), and Aragie et al. (2015) also reported positive results when financial performance was measured by ROE and capital structure by their respective variables.

On the other hand, some studies have found a negative relationship between capital structure and financial performance. For instance, Kifle (2016) reported a negative relationship when financial performance was measured by ROE. Similarly, Aragie et al. (2015) found a negative effect when

financial performance was measured by return on assets (ROA) and net profit margin, and Adamu, Y. (2018) observed a negative relationship when financial performance was measured by ROA and capital structure by long-term debt to equity ratio. Halake, J. (2020) also reported a negative relationship between ROA and capital structure (measured by the leverage ratio).

Foreign studies have also produced mixed results. Some found a positive relationship, such as Nirajini & Priya (2013), Abor (2005), Githire & Muturi (2015), Adesina et al. (2015). Others, like Rao et al. (2007), Bhattarai (2016), Muritala (2012), Madah, Sultan, & Farooq (2013), Vătavua (2015), Le & Phan (2017), Ebaid (2009), and Maina & Ishmail (2014), reported a negative relationship. These inconsistent findings suggest that the topic remains inconclusive, particularly in the Ethiopian context.

In Ethiopia, most studies on capital structure focus on assessing its effect on firms' financial performance. However, much of this research has emphasized the financial sector, particularly banking and insurance companies. Studies on the effect of capital structure on non-financial sectors, specifically manufacturing firms, are relatively few. For example, Kifle, A. (2016) examined cement manufacturing companies using ROA and ROE as performance measures; Telila, M. (2018) studied large construction companies using ROA; Tufa (2016) investigated manufacturing companies using ROCE; Halake, J. (2020) examined medium taxpayers in the food and beverage industry; Melese, A. (2013) researched the metal and engineering industry; Adamu, Y. (2018) focused on pharmaceutical firms; Liku, Y. (2017) looked into microfinance institutions; Endale, T. (2015) studied breweries companies; Aragie et al. (2015) examined the Commercial Bank of Ethiopia; and Birassa, F. (2016) explored the capital structure and profitability of manufacturing companies.

Given the limited research on the manufacturing sector, the topic remains open for further investigation. Based on this knowledge gap, the researcher aims to study the effect of capital structure on the financial performance of large food and beverage manufacturing companies (LFBMCs), using return on assets (ROA) as the financial performance measure. This study seeks to fill the gap in understanding the effect of capital structure on the financial performance of LFBMCs in Addis Ababa.

2.4 Conceptual frame work

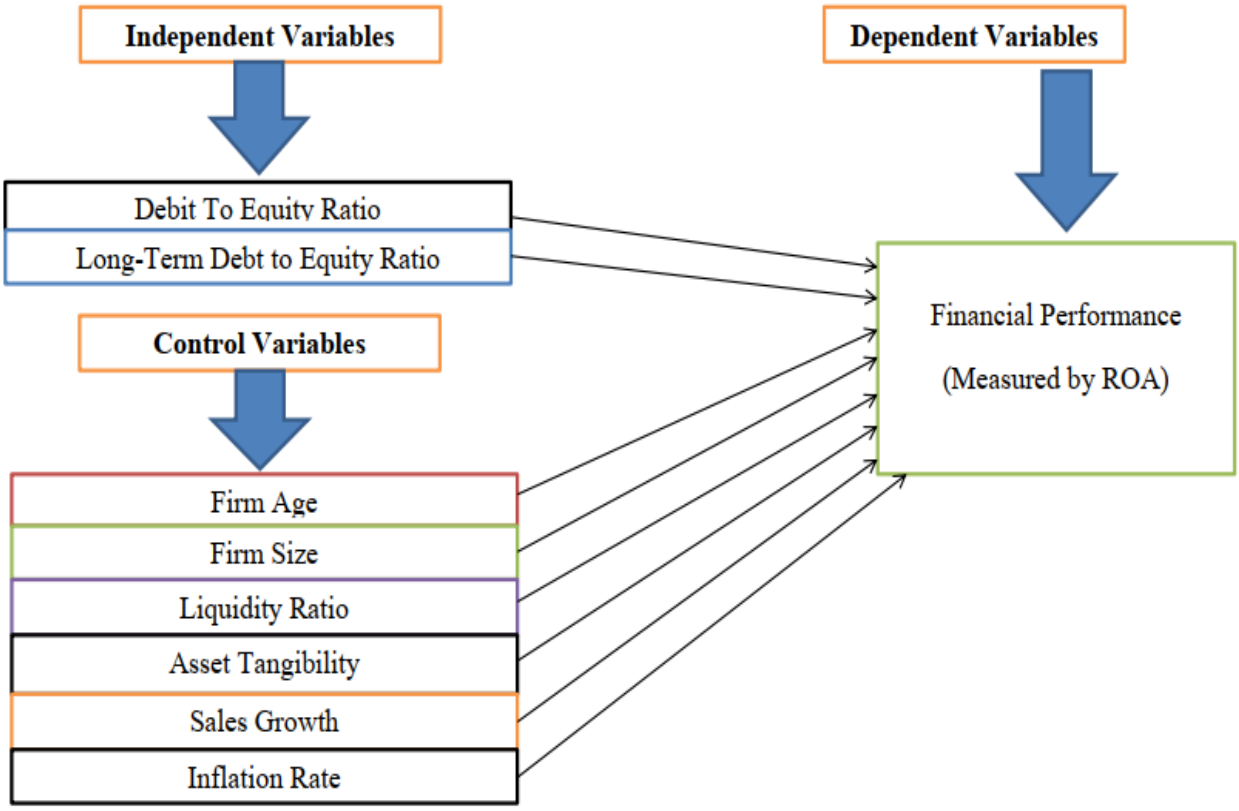

Figure 1 Conceptual Framework

Source: self-developed based on the literature survey

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is the path to systematically solving the research problem (Creswell, 2008). So, it concerns all the specific techniques, procedures, methods, and steps used systematically to gather and analyze data to address the intended objective of the study. Appropriate methodology is hence vital to address the study objectives. It also basically consists of research design, research approach, data source, type, and collection instrument, the target population of the study, sampling technique, method of data analysis and presentation, model specification, and variable definition and measurement.

3.2 Research Design

Adams et al. (2007) stated that a research design is the blueprint for fulfilling research objectives and answering research questions. In other words, it was a master plan, specifically outlining the methods and procedures for collecting and analyzing the needed information. Additionally, it needed to ensure that the information collected was appropriate for solving a problem. Therefore, the researcher needed to have a clear understanding of the sources of information and the design techniques based on sampling methods to reach their objectives. The study used a panel data that employed secondary quantitative data. To achieve the objectives stated in the preceding section, considering the nature of the research problem and the research perspectives, this study applied an explanatory research design.

3.3 Research Approach

According to Cresswell (2003), if the research problem aimed to identify factors that influence an outcome or understand the best predictor of outcomes, the collection of data to support or refute the hypothesis was executed using an instrument that measured attitudes, and the information was analyzed using statistical procedures and hypothesis testing. Therefore, the researcher used a quantitative research approach, as it was conducted to identify the causes or effects of capital structures on the outcomes of financial performance. Numerical data were also collected to support or refute the stated hypothesis, and the information was analyzed using statistical procedures, making the quantitative research approach the best fit for this study. According to Creswell (2003), the knowledge that developed through a post positivist approach was based on careful observation

and measurement of objective reality by developing numerical measurements of observations that needed to be tested, verified, and refined. In the scientific method, as accepted by post positivists, an individual began with a theory, collected data that either supported or refuted the theory, and then made necessary revisions before conducting additional tests. In this study, the researcher also developed numerical variable measurements that represented the actual figures for different components of capital structures and financial performance for the selected companies. Overall, the researcher used quantitative research methods or approaches to examine the effects of capital structures on the performance of large food and beverage corporations in Addis Ababa.

3.4 Population of the study and sample size

To achieve the research objectives and examine the relationships of the stated variables, the researcher applied panel data ordinary least squares methods, which combined the attributes of cross-sectional data (firms) and time series data (periods). Panel data comprised data sets consisting of multiple observations for each sampling unit. Working with panel data allowed the use of various techniques to estimate models with specific effects.

The data for this study were gathered from secondary sources, particularly from annual financial statements (balance sheets and income statements) and reports of the required subject companies. The population of the study consisted of forty-five manufacturing companies operating in the Food and Beverage industry, categorized under the Large Taxpayers Office (LTO). From this population, a sample of twelve large food and beverage manufacturing companies (LFBMCs) was selected based on their category under LTO, their involvement in the Food and Beverage sector and the researcher selects large tax payers companies due to the accessibility and more reliability of their data to tax officers of LTO.

Sampling is the process or technique of selecting a suitable sample to determine parameters or characteristics of the whole population (Adams et al., 2007). Sample selection was conducted using purposive sampling techniques. According to Etikan (2016), purposive sampling is a judgment sampling method that involves the deliberate selection of participants based on the qualities and availability of data. Due to the ownership type that involves selling and issuing shares to raise equity finance, share companies were selected. There were also many parties with a public interest in share companies or corporations. Additionally, the researcher included some private limited companies (PLCs) to make the results more trustworthy and inclusive for generalization.

Table 3.1 List of Sampled companies

Awash wine S.C	BGI Ethiopia PLC
Faffa food S.C	Kojj food complex PLC
Moha soft drink S.C	National alcohol and liquor factory
Khality food S.C	Shoa Bakery and Flour PLC
East African bottling S.C	Sugar corporations
Heinken S.C	Misrak flour and breads PLC

3.5 Data Sources and Instruments

The researcher used secondary data for this study. Secondary data is a type of data that had been previously collected for some other project rather than the one at hand but was found useful by the researcher. All the data were collected by reviewing the annual financial reports (balance sheets and income statements) of selected large taxpayers among Addis Ababa food and beverage companies from the Large Tax Office. These data were audited for tax declaration purposes. To avoid the risk of distortion in the quality of the data, the researcher collected audited financial statements, particularly balance sheets and income statements, for a period covering six years (2017-2022). The researcher employed a panel research design by combining cross-sectional and time series data, collecting six years of data from twelve large food and beverage manufacturing companies (LFBMCs) using purposive sampling techniques.

3.6 Variables Description

Dependent Variable - Financial Performance Measuring Variable

Dependent variables are variables that the researcher emphasizes for measurement or studies. These variables depend on independent variables, and their results change when the independent variables change. Various financial performance measures have been applied in previous empirical literature, serving as a basis for developing different variables in the model for this research. Researchers often prefer accounting measures of performance, such as return on equity (ROE), return on assets (ROA), return on capital employed (ROCE), and return on investment (ROI), which measure how much of the purchase price was earned on the investment. Among these, ROA is the most commonly used financial performance measure in previous studies. Therefore, based on prior

literature and the focus of this research, the researcher used return on assets (ROA) as the dependent variable to measure the financial performance of firms.

Return on Asset (ROA)

Return on Asset (ROA) Return on assets measures the amount of profit the company generates as a percentage of the value of its total assets. The profit percentage of assets varies by industry but in general, the higher ROA related to better financial performance Due to this, comparing a company's ROA to that of its competitors in the same industry or to its own historical ROA data is frequently more useful. Figures from previous periods. This variable were used by in prior studies by Kifle (2016), Adamu, Y. (2018), Telila, M. (2018), Halake, J. (2020) Hajar et al. (2023), Endri, E. et al (2021) , Çekrezi (2013), Winston Pontoh,(2013), Koech, (2013), Singh, (2013), (Opoku et al, 2014), Abbadi and Abu-Rub, (2012), Chinaemerem and Anthony, (2012) Pouraghajan & Malekian, (2012) Hasan et al. (2014)and Aragie et al., (2015)

$$ROA = \frac{\text{Net income}}{\text{Total asset}}$$

Independent Variables

Capital structure or leverage is the independent variable of this research that causes the effect on the thing we are trying to study that is the financial performance. These the independent variables can take different values and can cause corresponding changes in the dependent variables. And for this study it can be measured by debt ratio and long term debt to equity ratio.

Debt Ratio

Leverage is a ratio or the proportion that is used to measure the extent or amount to which assets are financed with debt that means how much of the debit burden is financed or amount of capital which is financed by debit as opposed to equity according to Rayank, K. (2010). Leverage is used to identify how much debt a firm has and how percent of its assets financed by debt, meanwhile according to Noviyati et al (2023) leverage is the use of securities to fund some of the company's assets where this securities have dependent in the form of a fixed return burden with the assumptions that it can increase the final return value for investors. , Kifle (2016), Melese (2013), Tufa (2016), Abiodun (2014), Hajar et al. (2023), Hasan et al. (2014), Taani (2013) and Endri, E. et al (2021) found a positive relation between debt ratio and financial performance of firms.

The ratio is computed as;

$$\text{Debit ratio} = \frac{\text{Total liability}}{\text{Total asset}}$$

Long term debt to equity ratio

Long-term debt to equity ratio calculates long-term debt financing as a proportion of total financing, and it has been used as a measure of capital structure .the empirical findings of Endri, E. et al (2021), Abiodun (2014), Hajar et al. (2023) Taani (2013) and Endri, E. et al (2021)found that a positive relationship between long term debt to equity ratio and financial performance of a firms.

It can be calculated as follows;

$$\text{Long term debt to equity ratio} = \frac{\text{Total long term liability}}{\text{Total equity}}$$

Firm Size and financial performance

Due to the reason that economies of scale the size of a firm is one of the important determining factors of firm's financial performance. Large and famous firms have higher access to the long term capital market than the smaller firms either borrow short term by means of bank loans or issue stocks that is larger firms will get high debt financing than smaller firms. There are different researcher's uses this variable: Tufa (2016), Melese (2013), Kifle (2016), and Aragie et al., (2015), Seetanah et al. (2014), Çekrezi (2013), (Winston Pontoh, 2013), (Koech, 2013), (Singh, 2013) and (Opoku et al, 2014), Pouraghajan & Malekian (2012), Telila, M. (2018) all of them found that there is a positive relation between firm's size and financial performance. Additionally size could affect debt available to firms due to information asymmetry so that information asymmetry leads firms to prefer debt since equity is likely to be undervalued in the market. This suggests that larger firms with less information asymmetry will have more debt availability for them (Rao,Al-Yahyee and Syed,2007).

Melese (2013) due to the capacity larger companies can exploit economies of scale and scope, they would be more efficient, have greater access to long term capital from financial institutions and they could have also a greater power in competitive market than smaller companies

Isak A., Unal E., and Unal Y. (2007) identifying the effect of firm size on profitability of selected manufacturing firms in Turkey; in their study they have been used data of 112 manufacturing firms quoted on the Istanbul stock exchange during between the years 20052013.the selected size variables indicates that there is a positive relationship with their profitability. Based on the above empirical results, the researcher expect a positive relation between firm's size and financial performance of large food and beverage manufacturing companies.

It computed as logarithm of total assets to achieve the normal distribution and linearity Size of a firm.

Size (SIZ) = Natural logarithm (Total assets).

Liquidity and financial performance

Liquidity is measured by a current ratio and it indicates the efficiency of current asset utilization, so its management determines to a great extent the growth and financial performance of a firms basically the food and beverage manufacturing firms of a company. More recent studies have confirmed the appearance of a relationship between liquidity and profitability. The study of Kant M. (2018) investigated under the factors influencing the profitability of manufacturing firms listed on the New York stock exchange using ORBIS database on 250 American firms for the year 2012-2017. The results shows that liquidity have appositive significant relationship on firm's performance. Thus having a faster inventory turnover and receiving payment quicker results in a more liquid and more profitable organizations. The above argument also supported by the findings of Trag and Nguyen (2020) & Vijayakumaran(2019), Adamu, Y. (2018) and Kifle (2016.Liquidity Ratio measures the firm's ability to use its current assets to retire its liabilities so it is computed as follows.

$$\text{Liquidity Ratio (LIQ)} = \frac{\text{Current Assets}}{\text{Current Liabilities.}}$$

Tangibility and financial performance

Asset tangibility is one of the major determinant factor of a company's financial performance and it refers to a firm's investment in ‗ asset. This variables used by different previous empirical studies as an independent variable (Horton, 2017), (Kifle, A.2016), Melese (2013), Telila, M. (2018), and

Adamu, Y. (2018) declaring that a positive influence of tangible assets on the financial performance of manufacturing companies The ratio is computed as:

$$\text{Tangibility (TAN)} = \frac{\text{Total Fixed Asset}}{\text{Total Asset}}$$

Sales growth and financial performance

Junnei L. & Edi P. (2019**)** under their study conduct to investigate the factors affecting profitability or return on asset. Especially among Indonesia food and beverage companies using the panel data comprising 48 observations of 12 companies that are listed on the Indonesia stock exchange (IDX) in 2013 to 2016 periods and analyzed by a regression analysis. Finally the study found out that profitability is proved positively influenced by sales growth. The performance of the companies with higher sales growth is better than those which have lower sales growth (Babaloa, 2013), thus the positive value in performance is thought to be result in lower level of financial distress and enhance financial performance of a company. This finding also supported by the findings of Kifle (2016), Halake, J. (2020) and Tufa (2016),

The ratio is computed as:

$$\text{Sales growth (GRO)} = \frac{\text{Total Sale Current Year - Total Sale Prior Year}}{\text{Total Sale Current Year}}$$

Age and financial performance

Esperanca et al (2003) based on agency theory that financers use along liveness of the firm as a measure of their credit worthiness and firms have built up over the years and which is identified by the market, which has observed their ability to meet their obligation in a timely manner. Additionally Adamu, Y. (2018) on their research found that there is an existence of apositive relationship between age and firms financial performance.

It is computed as;

Age (AGE) = age or number of years since establishment for a firm

Inflation rates and financial performance

Inflation affects profits by reacting on sales volume through influencing the level of costs and by changing the relationship between cost and prices. Since manufacturing companies generally determine prices by references to cost. Pricing policy becomes particularly important in inflation and the level of profits differs according to whether prices are determined on basis of original costs or current replacement cost (Henning Weber, 2012).the investigation in to the existence and nature of the link between inflation and company's performance has been conducted for a long period of time. Most economists confirms that inflation has a negative effect on company's performance.it is also supported by the findings of Julius W.O, Consolata N. and Reuben R. (2021), Adamu, Y. (2018) and Halake, J. (2020) It is computed as;

Inflation rates (INF) = yearly inflation rates

3.7 Data Analysis

3.7.1 Method of data analysis

Descriptive statistics were applied to describe and summarize the basic features of the data in the study, providing quantitative descriptions in a manageable form. This statistical method was used to analyze the data by presenting it in the form of simple ratios, percentages, tables, and graphs, while also providing measures of central tendency, dispersion, and distribution shapes. The collected data were subjected to analysis using Stata version 12 software. The data were collected from secondary sources, and the analysis was conducted in this study. The regression model was employed in the form of linear regression, specifically using panel data analysis by implementing the pooled Ordinary Least Squares (POLS) method. POLS regression analysis offered an approach for predicting or forecasting financial performance based on one or more listed independent variables. The reason for using POLS was that it provided the most reliable method for predicting the relationship between financial performance and leverage or capital structure, which was the main objective of this study. Relevant tests were conducted to check the validity of the model based on the assumptions of the Classical Linear Regression Model (CLRM). To ensure that the data met the basic assumptions of the CLRM, tests for these assumptions were conducted.

3.7.2 Model Specification and selection

Financial Performance = f (Capital Structure)

Model:

$ROA = \beta 0 + \beta 1 (DTA) + \beta 2 (LDTE) + \beta 3 (SIZ) + \beta 4 (LIQ) + \beta 5 (ATA) + \beta 6 (GRO) + \beta 7 (AGE) + \beta 8 (\log INF) + \varepsilon it$

Where: ROA= Return on asset

$\beta 0$ = Constant coefficient

β= Coefficients of regression used to measure independent variables

DTA = Debit ratio (total debit to asset ratio)

LDTE= Long term debt to equity ratio

SIZ = Firms size

LIQ = liquidity ratio

ATA= Asset tangibility

GRO= sales growth

AGE= Age of the firms

INF = Annual inflation rate

εit = Error factors that are not included in the model

CHAPTER FOUR: DATA PRESENTATION, DISCUSSION AND ANALYSIS

4. Introduction

In this chapter, the data collected from the financial reports of each food and beverage manufacturing industry are analyzed and interpreted. The chapter is divided into five sections: the first section presents the descriptive statistics of the studied variables; the second section covers the correlation analysis between dependent and independent variables; the third section addresses the tests for the assumptions of the Classical Linear Regression Model (CLRM); the fourth section discusses the econometric model specification tests; and finally, the fifth section presents the results of the regression analysis.

4.1 Descriptive statistics

Descriptive statistics provide an overview of the data used in the model. Table 4.1 summarizes these statistics for dependent and independent variables across twelve manufacturing industries, totaling 72 observations from 2017 to 2022. These statistics offer a broad description of the dataset, including the mean, standard deviation, minimum, and maximum values for both sets of variables. The table displays the average metrics for the variables derived from the financial statements of each food and beverage manufacturing industry, along with data from the annual reports of the Ethiopian revenue and custom authority. The descriptive statistics for all variables are presented, with each explanatory variable having 72 observations, reflecting its potential impact on the dependent variable (Return on Assets).

Table 4.2: Summary of Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA (Return on Assets)	72	0.0297	0.0184	0.0004	0.0662
DTA (Debt to Asset Ratio)	72	0.6056	0.8292	-1.2502	2.6127
AGE (Firm Age)	72	51.92	19.93	15	84
SIZ (Firm Size)	72	0.2701	0.0170	0.2313	0.3005
LIQ (Liquidity Ratio)	72	0.6268	0.4160	0.0039	1.9293
LDTE (Long-term Debt to Equity Ratio)	72	0.0656	0.0515	0	0.1931
ATA (Asset Tangibility)	72	0.1389	0.0615	0	0.2818
GRO (Sales Growth)	72	0.4054	1.5748	-0.9748	13.1616
INF (Inflation Rate)	72	0.2037	0.0827	0.1069	0.347

Source: STATA version 12

Return on Assets (ROA)

The descriptive statistics for ROA indicate that the average profitability of the firms in the sample is 2.97%, with a standard deviation of 1.84%. This relatively low variability suggests that most firms have profitability levels close to the average. The minimum ROA is 0.04%, indicating that some firms are barely profitable, while the maximum ROA is 6.62%, showing that a few firms perform relatively well. Overall, the data suggests that while most firms are achieving modest profitability, there is some variability in financial performance across the sample.

Debt to Asset Ratio (DTA)

The average DTA across the firms is 60.56%, indicating that a significant portion of the firms' assets are financed through debt. However, the standard deviation of 82.92% reveals considerable variation in leverage among the firms. The range of DTA values spans from 125.02% to 261.27%, with the negative minimum reflecting potential financial distress or negative equity situations in some firms. The high maximum suggests that certain firms are heavily leveraged, relying extensively on debt financing. This wide range underscores the diverse financial structures present in the sample.

Firm Age (AGE)

The average firm age is approximately 51.92 years, with a standard deviation of 19.93 years, indicating a wide range of difference of firm ages in the sample. The minimum age of 15 years represents younger firms, while the maximum age of 84 years reflects more established companies. This variation suggests that the sample includes firms at different stages of their lifecycle, which could influence their financial strategies and performance.

Firm Size (SIZ)

Firm size, as measured logarithmically, has an average value of 0.2701 with a narrow standard deviation of 0.0170. This suggests that the firms in the sample are relatively similar in size, with a narrow range from 0.2313 to 0.3005. The consistency in firm size implies that economies of scale and size-related advantages are likely comparable across the firms, potentially influencing their profitability in a similar manner.

Liquidity Ratio (LIQ)

The average liquidity ratio is 0.6268, meaning that, on average, the firms have current assets covering approximately 62.7% of their current liabilities. The standard deviation of 0.4160 indicates significant variability in liquidity across the firms. The liquidity ratio ranges from as low as 0.0039 to as high as 1.9293, suggesting that some firms may face challenges in meeting shortterm obligations, while others have substantial liquidity buffers. This variation could influence how firms manage their working capital and operational demands.

Long-term Debt to Equity Ratio (LDTE)

The LDTE ratio has an average value of 0.0656, indicating that, on average, firms have a relatively small portion of their equity financed by long-term debt. The standard deviation of 0.0515 reflects moderate variability in the use of long-term debt. While some firms use no longterm debt, others rely more heavily on it, with a maximum LDTE ratio of 0.1931. This variation in long-term financing strategies may impact firms' financial flexibility and risk profiles.

Asset Tangibility (ATA)

On average, tangible assets represent 13.89% of total assets across the firms, as indicated by the ATA variable. The standard deviation of 0.0615 shows moderate variation in tangible asset proportions. Some firms have no tangible assets, while others have up to 28.18% of their assets in tangible form. This diversity in asset composition suggests that firms adopt different strategies, with some relying more on intangible assets or less on capital-intensive operations.

Sales Growth (GRO)

The average sales growth is 40.54%, indicating substantial growth across the firms. However, the high standard deviation of 1.5748 suggests significant variability in sales growth, ranging from a decline of 97.48% to a growth of 1316.16%. This wide range indicates that while some firms are rapidly expanding, others may be experiencing contraction. Firms are at different phases of their growth cycles, which could affect their overall financial performance.

Inflation (INF)

The average inflation rate during the study period is 20.37%, with a standard deviation of 8.27%. Inflation rates range from 10.69% to 34.70%, reflecting varying macroeconomic conditions. The

moderate variability suggests that firms faced different levels of inflationary pressure, which may have influenced their costs, pricing strategies, and overall profitability. Firms that managed inflationary impacts more effectively may have had better financial performance.

4.2. Correlation analysis

Correlation is a method used by researchers to describe and measure the degree of association or relationship between two or more variables or sets of scores (Creswell, 2014). The correlation coefficient ranges from -1 to +1. A coefficient of +1 signifies a perfect positive relationship between the variables, while a coefficient of -1 indicates a perfect negative relationship. A correlation coefficient of 0 denotes no relationship between the variables (Gujarati, 2004).

Table 4.3 Correlational Analysis

	Roa	dta	Siz	liq	ldte	ata	gro	age	inf
roa	1.0000								
dta	-0.7547	1.0000							
siz	0.2577	-0.1583	1.0000						
liq	0.2881	-0.2642	-0.1854	1.0000					
ldte	-0.6886	0.4984	0.0229	-0.4238	1.0000				
ata	-0.5794	0.3407	0.0067	-0.2671	0.3738	1.0000			
gro	0.0030	-0.0212	-0.2087	0.2676	-0.0049	0.1963	1.0000		
age	-0.8413	0.6775	-0.2113	-0.3336	0.7334	0.5152	0.1139	1.0000	
inf	0.0242	-0.0504	0.3017	0.0022	-0.0135	0.0592	-0.0145	-0.0712	1.0000

Source: STATA version 12

The correlation analysis reveals key relationships between the independent variables and the dependent variable, Return on Assets (ROA). There is a strong negative correlation between ROA and both Debt to Asset Ratio (DTA) (-0.7547) and firm age (AGE) (-0.8413), indicating that higher leverage and older firm age are associated with lower profitability. The Long-term Debt to Equity Ratio (LDTE) also shows a strong negative correlation with ROA (-0.6886), suggesting that firms with higher long-term debt relative to equity tend to have lower profitability. Asset tangibility (ATA) has a moderate negative correlation with ROA (-0.5794), implying that firms with more tangible assets may experience lower returns. On the other hand, firm size (SIZ) and liquidity (LIQ)

exhibit weak positive correlations with ROA (0.2577 and 0.2881, respectively), suggesting that larger firms and those with better liquidity tend to have slightly higher profitability. Sales growth (GRO) and inflation (INF) have very weak correlations with ROA (0.0030 and 0.0242, respectively), indicating that these factors have minimal impact on the firms' profitability. Overall, the analysis underscores the significant negative impact of high leverage, long-term debt, and firm age on profitability, while firm size and liquidity contribute positively, albeit weakly, to ROA.

4.3 Tests for classical linear regression model assumptions (CLRM)

To ensure the validity and robustness of the regression results, the basic assumptions of the Classical Linear Regression Model (CLRM) were tested to identify and correct any misspecifications, thereby enhancing the quality of the research. Diagnostic tests were conducted to check for issues such as errors with zero mean, normality, heteroskedasticity, multicollinearity, autocorrelation, and linearity. These tests were performed to confirm that the data met the fundamental assumptions of the CLRM. The results of these model assumption tests are presented in the following section.

4.3.1 Assumption one: The errors have zero mean ($\varepsilon = 0$)

Classical linear regression models assume that the error terms should have a zero mean. According to Brooks (2008), this assumption is maintained if a constant term is included in the regression model equation. In the model specification section, the researcher included a constant term ($\beta 0$ = constant coefficient), ensuring that the assumption of a zero mean for the error term is upheld.

4.3.2 Assumption two: Test for Normality

According to Brooks (2008), if the residuals are normally distributed, the histogram should exhibit a bell-shaped curve, and the normality test statistic should not be significant. This implies that the p-value from the normality test should be greater than 0.05 to support the null hypothesis that the distribution is normal at the 5% significance level. Therefore, the researcher tested the normality of residuals using the Shapiro-Wilk W test. As indicated in the following tables (Table 4.4 and Table 4.5), the p-value is greater than 0.05. Since the null hypothesis posits that the error terms are normally distributed, the researcher had no reason to reject the null hypothesis.

Table 4.4. SHAPIRO-WILK W TEST FOR NORMAL DATA

Shapiro-Wilk W test	For	normal	data	
Variable	Obs W	V	z	Prob>z
Residual	72 0.98810	0.749	-0.628	0.73516

Source: STAT version 12 output

4.3.3 Assumption three: Test for multicollinearity

Multicollinearity arises when independent variables are highly correlated, leading to a situation where the regression model fits the data well, but none of the independent variables significantly impact the prediction of the dependent variable (Gujarati, 2004). The assumption related to multicollinearity is that explanatory variables should not be correlated with one another, either over time or across sections; they should be orthogonal to each other. If the variables are correlated, it violates the CLRM assumption and indicates a multicollinearity issue. To detect multicollinearity, tests such as the Variance Inflation Factor (VIF) can be employed.

Table 4.5 Multicollinearity Test

Variable	VIF	1/VIF
Age	3.80	0.263484
Ldte	2.46	0.406029
Dta	1.89	0.529448
Ata	1.49	0.671798
Liq	1.43	0.698200
Siz	1.34	0.748564
Gro	1.23	0.812104
Inf	1.11	0.898776
Mean VIF	1.84	

Source: STAT version 12 output

As indicated in the table above, the Variance Inflation Factor (VIF) values for each variable are below 10, with a mean VIF of 1.84. According to Gujarati (2004), multicollinearity is a concern if the mean VIF value exceeds 10 or if the tolerance level (1/VIF) falls below 10%. Since neither condition is met, we can conclude that there is no multicollinearity problem in the data, which enhances the reliability of the regression analysis.

4.3.4 Assumption four: Test for Heteroskedasticity

This assumption posits that the variance of the errors remains constant across all points in the model. Homoskedasticity means that the variance of the error term is constant, whereas heteroskedasticity indicates variability in the error term. According to Breusch & Pagan (1980), if the test statistic has a p-value below the significance level (0.05), the null hypothesis of homoskedasticity is rejected, and heteroskedasticity is assumed. Conversely, if the p-value is greater than 0.05, homoskedasticity is assumed. Please refer to the table below for the relevant results.

Table 4.6 Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Breusch- Pagan / Cook - Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of roa
chi2(1) = 3.45
Prob > chi2 = 0.0632

Source: STATA,version 12 output

As shown above, the p-values for the Breusch-Pagan/Cook-Weisberg test for heteroskedasticity are above the threshold of 0.05, with a p-value of 0.0632. This indicates that there is no evidence to reject the null hypothesis of homoskedasticity.

4.3.5 Assumption five: Test for autocorrelation

This assumption posits that the covariance between error terms over time for the same type of data should be zero. To determine if there is any serial correlation in the data, the BreuschGodfrey LM

test for autocorrelation was conducted. The results of both tests indicate that there is no serial correlation present in the data.

Table 4.7 Wooldridge test for autocorrelation in panel data

Wooldridge test for autocorrelation	in	panel	data
H0: no first-order autocorrelation			
F(1, 11) = 2.312			
Prob > F = 0.1566			

Source: STAT version 12 output

The autocorrelation test result shows a p-value of 0.1566. Since this p-value is greater than 0.05, there is no reason to reject the null hypothesis, which states that there is no serial correlation.

4.3.6 Assumption six: Linearity Test

Finally, linearity is typically assessed through a plot of observed versus predicted values or a plot of residuals versus predicted values (Christopher & Rim, 2014). The examination of residual plots is a preferred method for detecting linearity. Since the points are symmetrically distributed around a diagonal line in the P-P plot, as shown below, the linearity assumption is upheld in this study.

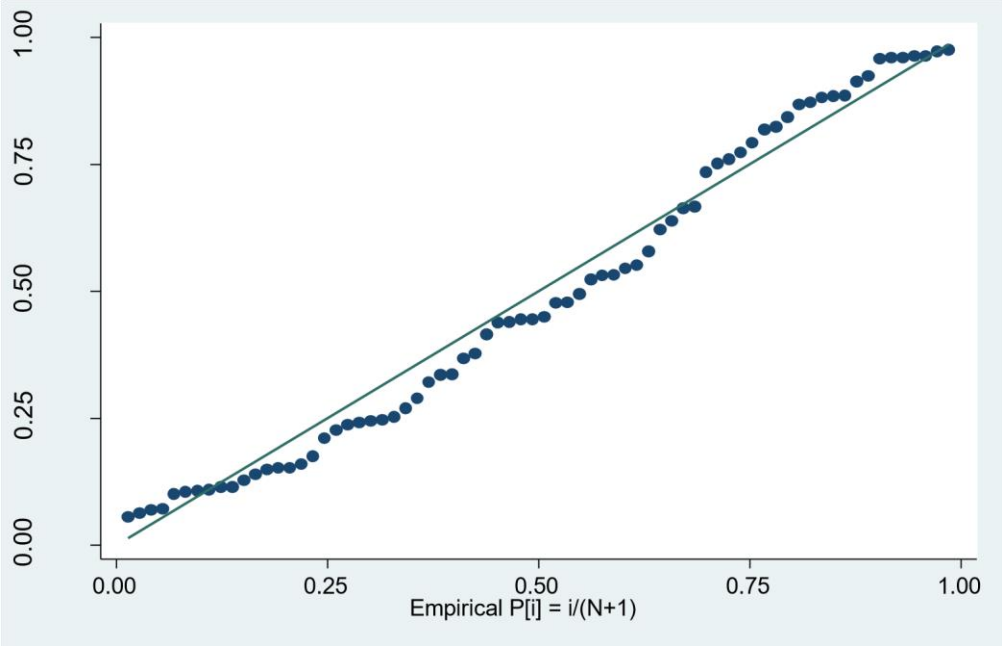

Figure 2 Linearity test

Source: STATA version 12 output

4.4 Econometric model specification tests

The results so far indicate that all CLRM assumptions are satisfied, allowing for the safe application of ordinary least squares regression. However, given that this study uses panel data, it is essential to select the most appropriate panel estimation techniques. To determine the suitable estimation method for this panel data set, Hausman specification tests and Breusch and Pagan's Lagrange Multiplier (LM) tests were conducted, as explained below.

4.4.1 Hausman specification test

The Hausman specification test is used to determine whether the fixed effect model or the random effect model is more appropriate. According to Hausman (1978), the null hypothesis posits that the preferred model is the random effect model, which assumes that unobserved variables are not correlated with the explanatory variables. The alternative hypothesis suggests that the fixed effect model is preferred. If the p-value of the test statistic (chi^2) is above 5%, the random effect (RE) panel regression is recommended. Conversely, if the p-value is 5% or below,

the fixed effect model (FE), also known as within regression, is considered a more suitable estimation tool.

Table 4.8 Hausman specification test

Test:	**Ho: difference in coefficients not systematic**
	chi2(8) = (b-B)'[(V_b-V_B)^(-1)](b-B)
	= 10.44
	Prob>chi2 = 0.2356
	(V_b-V_B is not positive definite)

Source: Own computation by using STATA 12

According to the table, the Hausman specification test favored the random effect model, with a pvalue of 0.2356, which is greater than 5%. This suggests that the random effects (RE) approach is an efficient estimator for panel data models, while the fixed effect model is not deemed suitable for this study. Since the Hausman test supports the use of the random effect model, the next step is to conduct Breusch and Pagan's Lagrange Multiplier (LM) test to decide between the pooled OLS and random effect models.

4.4.2. Breusch and Pagan LM Test

The Breusch and Pagan Lagrangian Multiplier (LM) test was used to choose between the pooled ordinary least squares (POLS) model and the random effects model. The null hypothesis for this test posits that the variance across the sample is zero, suggesting that the POLS model is appropriate. The alternative hypothesis suggests that the random effects model is more suitable. As shown in the table below, the Breusch and Pagan LM test resulted in a p-value of one, indicating that there are no random effects (i.e., u is zero) and no significant differences across the food and beverage manufacturing industries. Consequently, the pooled OLS model was selected for the analysis and discussion of results in this study, as the tests recommended it as the most appropriate estimation model.

Table 4. 9 Breusch and Pagan LM Test Comparing POLS and Random Effect

Breusch and Pagan Lagrangian multiplier test for random effects		
roa[id,t] = Xb + u[id] + e[id,t]		
Estimated results:		
Var	**sd = sqrt(Var)**	
---------+----------		
roa	**.0003382**	**.0183913**
e	**.0000485**	**.0069673**
u	**9.26e-07**	**.0009621**
Test: Var(u) = 0		
chibar2(01) =	**0.47**	
Prob > chibar2 =	**0.2461**	

Source: STAT version 12 output

4.5 Regression analysis

In the previous section of this study, the econometric model specification test was conducted, confirming that the pooled OLS regression model is suitable for this analysis. Therefore, this section presents the regression results from the pooled OLS model, which was used to examine the determinants of financial performance in food and beverage manufacturing companies.

According to Wooldridge (2015), POLS estimation is simpler and potentially naive, and it does not rely on strict exogeneity. If there are neither significant cross-sectional nor temporal effects, all data can be pooled to run an ordinary least squares (OLS) regression with constant intercept and slope coefficients across entities and time. In such cases, OLS provides efficient and consistent parameter estimates. However, a major limitation of this model is its inability to account for differences between the various entities in the study. By pooling data from the twelve manufacturing companies, the model overlooks any heterogeneity or individuality among these entities. Thus, all 72 observations are combined and analyzed through the regression model (Gujarati, 2004).

Table 4.10: Results of pooled OLS Regression Analysis

Source |	SS	df	MS	Number of obs =	72
				F(8, 63) =	44.61
Model |	.020411697	8	.002551462	Prob > F =	0.0000
Residual |	.003603273	63	.000057195	R-squared =	0.8500
				Adj R-squared =	0.8309
Total |	.024014969	71	.000338239	Root MSE =	.00756

roa |	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
dta |	-.0070987	.0014877	-4.77	0.000	-.0100716	-.0041259
siz |	.1876714	.0609044	3.08	0.003	.0659638	.3093791
liq |	-.0034354	.002582	-1.33	0.188	-.0085951	.0017242
ldte |	-.0791318	.0273565	-2.89	0.005	-.1337993	-.0244642
ata |	-.0778946	.0178159	-4.37	0.000	-.1134969	-.0422923
gro |	.0016456	.0006324	2.60	0.012	.0003817	.0029094
age |	-.0033468	.0009442	-3.54	0.001	-.0052337	-.0014599
inf |	-.0119396	.0114502	-1.04	0.301	-.0348211	.0109419
_cons |	.0105982	.0165104	0.64	0.523	-.0223952	.0435916

Source: Own computation by using STATA 12

The pooled OLS regression analysis provides insights into how various independent variables affect the dependent variable, Return on Assets (ROA). The model is statistically significant overall, as indicated by an F-statistic of 44.61 and a p-value of 0.0000, meaning that the independent variables collectively explain a significant portion of the variation in ROA. The R-squared value of 0.8500 indicates that 85% of the variation in ROA is explained by the model, with an adjusted R-squared of 0.8309, suggesting a robust fit even after accounting for the number of predictors.

1. Debt to Asset Ratio (DTA)

The coefficient for the Debt to Asset Ratio (DTA) is -0.0071, which is statistically significant ($p < 0.000$). This indicates a significant negative relationship between total debt and ROA, where each unit increase in the debt-to-asset ratio decreases ROA by 0.0071 units. The negative impact of DTA on ROA aligns with the Trade-off Theory, suggesting that excessive leverage can increase the risk of financial distress and bankruptcy, ultimately reducing profitability. This finding is consistent with Ethiopian studies, such as Halake J.(2020), Ahmed M.(2015), Neway A. (2011) and Aragie etal(2015), which also identified a negative effect of high leverage on financial performance in the Ethiopian context. Thus, it appears that large food and beverage firms in Addis Ababa may be over-leveraged, leading to reduced profitability due to the burdens of financial distress and interest obligations.

2. Long-term Debt to Equity Ratio (LDTE)

The Long-term Debt to Equity Ratio (LDTE) shows a coefficient of -0.0791, which is statistically significant ($p = 0.005$). This negative relationship indicates that a higher proportion of long-term debt relative to equity is associated with a lower ROA. The negative impact of LDTE supports the Pecking Order Theory, which posits that firms prefer internal financing over debt and equity due to information asymmetry. The reliance on long-term debt may increase financial burdens and reduce profitability, as seen in studies by Tufa (2016), Adamu Y. (2018) and Endrie E etal (2021) within Ethiopian manufacturing firms. These findings suggest that long-term debt, while providing immediate capital, might hinder financial performance in the long run due to the increased costs and risks associated with servicing these obligations.

3. Firm Size (SIZ)

Firm size (SIZ) has a positive and significant coefficient of 0.1877 ($p = 0.003$), indicating that larger firms tend to be more profitable, with a 1% increase in size leading to a 0.1877 increase in ROA. This positive relationship aligns with theories suggesting that larger firms benefit from economies of scale, better access to financing, and stronger market positions. The Agency Cost Theory further supports this finding, as larger firms often have more efficient management and lower agency costs. Empirical studies, such as those by Rao et al. (2007) Kifle A. (2016), Twairesh (2014) and Telila M.(2018) also confirm the positive impact of firm size on profitability. For large

food and beverage firms in Addis Ababa, this suggests that scaling operations and expanding market share are key strategies for enhancing financial performance.

4. Liquidity Ratio (LIQ)

The Liquidity Ratio (LIQ) has a coefficient of -0.0034, which is not statistically significant ($p = 0.188$), indicating that liquidity does not play a major role in explaining profitability in this context. The lack of a significant relationship suggests that the ability of these firms to meet short-term obligations might not directly influence their profitability. This finding is consistent with the mixed results found in the literature. While some studies highlight the importance of liquidity for financial health, others, including Tufa (2016), found that liquidity was not significantly related to profitability in Ethiopian manufacturing firms. For food and beverage firms, it appears that liquidity management may not be a primary concern for improving profitability, as other factors such as debt management and asset utilization take precedence.

5. Asset Tangibility (ATA)

Asset Tangibility (ATA) shows a significant negative coefficient of -0.0779 ($p < 0.000$), suggesting that firms with higher tangible assets tend to have lower ROA. This negative relationship might be counterintuitive, but it could indicate that these firms have over-invested in non-liquid, low-return tangible assets. According to the Trade-off Theory, tangible assets can reduce financial distress by serving as collateral for debt, but excessive investment in fixed assets might reduce operational flexibility and profitability. Empirical studies, such as those by Akintaye (2009) and Kifle A. (2016), suggest that while tangible assets can lower financial distress, overinvestment can hinder a firm's ability to achieve higher returns. For Addis Ababa's large food and beverage companies, this indicates the need for a balanced approach to asset investment, focusing on optimizing asset efficiency rather than merely increasing tangible assets.

6. Sales Growth (GRO)

Sales Growth (GRO) has a positive and significant coefficient of 0.0016 ($p = 0.012$), indicating that firms with higher sales growth tend to have better financial performance. The positive relationship between sales growth and ROA aligns with the Pecking Order Theory, where growing firms rely more on internally generated funds, avoiding the costs associated with debt and equity issuance.

Empirical evidence from studies by Lee & Phan (2017), Endrie. Et, al. (2021), Kifle,A.(2016), Halake,J.(2020) and Getahun (2016) also supports the idea that sales growth positively influences profitability. For food and beverage firms in Addis Ababa, focusing on strategies that enhance sales growth, such as market expansion and product innovation, could be key to improving profitability.

7. Firm Age (AGE)

Firm Age (AGE) shows a significant negative coefficient of -0.0033 ($p = 0.001$), suggesting that older firms tend to be less profitable. This negative relationship supports the Organizational Life Cycle Theory, which posits that firms in the later stages of their life cycle may experience declining performance due to factors such as outdated technologies and organizational inertia. While some studies, like those by Adamu Y. (2018), found a positive relationship between firm age and performance, your results align more closely with the Life Cycle Theory, predicting diminishing returns as firm's age. For older food and beverage firms in Addis Ababa, this suggests the importance of continuous innovation and modernization to maintain competitiveness and profitability.

8. Inflation (INF)

Inflation (INF) has a negative coefficient of -0.0119, which is not statistically significant ($p = 0.301$), indicating that inflation does not significantly impact ROA for these firms. The lack of a significant relationship suggests that these firms may have developed effective strategies to manage inflationary pressures, such as cost management or pricing flexibility. This finding contrasts with some studies that identify inflation as a major factor affecting profitability, but it aligns with the mixed results found in the literature. For large food and beverage companies in Addis Ababa, it appears that inflation is not a primary concern for financial performance, likely due to their ability to adjust prices or manage costs effectively.

Table 4.11 Summary of regression result

Explanatory variables	The actual result of ROA	Significance level	Hypothesis status
Debit ratio (total debit to asset ratio)	Negative and significant	<5%	Fail to reject
Long term debt to equity ratio	Negative and significant	<5%	Fail to reject
Firms size	Positive and significant	<5%	Fail to reject
liquidity ratio	Negative and insignificant	>5%	rejected
Asset tangibility	Negative and significant	<5%	Fail to reject
sales growth	Positive and significant	<5%	Fail to reject
Age of the firms	Negative and significant	<5%	Fail to reject
Annual inflation rate	Negative and insignificant	>5%	rejected

CHAPTER FIVE
SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATION

5.1. Summary of Major Findings

The descriptive statistics provide an overview of key variables in the study, covering 72 observations from 12 food and beverage manufacturing industries in Addis Ababa between 2017 and 2022. The statistics highlight the average profitability, debt levels, firm age, size, liquidity, and growth, along with inflation during the period. Return on Assets (ROA) shows modest average profitability with low variability, while the Debt to Asset Ratio (DTA) reflects significant leverage diversity. Firms in the sample vary in age and liquidity, with some showing strong growth and others facing financial distress. Inflation rates during the study period also show moderate variability, affecting firms' costs and profitability. Overall, the data reveal diverse financial structures and performance among the firms.

The major findings of the study reveal that the Debt to Asset Ratio (DTA) and Long-term Debt to Equity Ratio (LDTE) have significant negative impacts on Return on Assets (ROA), indicating that higher leverage is associated with lower profitability. Firm size (SIZ) is positively associated with ROA, suggesting that larger firms tend to be more profitable. Conversely, firm age (AGE) and asset tangibility (ATA) are negatively related to ROA, implying that older firms and those with higher tangible assets experience lower profitability. Sales growth (GRO) shows a positive and significant relationship with ROA, highlighting the importance of revenue expansion in enhancing financial performance. In contrast, liquidity (LIQ) and inflation (INF) do not have significant effects on ROA, suggesting that these variables do not play a major role in determining the profitability of the firms in the study.

5.2 Conclusion

In conclusion, the descriptive statistics illustrate the varied financial conditions and performance of the food and beverage manufacturing industries in Addis Ababa from 2017 to 2022. While most firms exhibit modest profitability, there are notable differences in leverage, liquidity, growth, and firm age, reflecting diverse financial strategies and challenges. High variability in debt levels and liquidity suggests that some firms are more financially stable, while others face

potential distress. The inflationary environment further adds complexity, affecting overall profitability. These findings emphasize the importance of understanding firm-specific characteristics when evaluating financial performance within the industry.

Moreover, the findings from the pooled OLS regression analysis provide a comprehensive understanding of the factors influencing the financial performance of food and beverage manufacturing firms in Addis Ababa, as measured by Return on Assets (ROA). The results indicate that capital structure variables, such as the Debt to Asset Ratio (DTA) and Long-term Debt to Equity Ratio (LDTE), have a significant negative impact on profitability. So it implies that, most profitable LFBMCs were those maintaining a low proportion of their debt both in terms of total debt and long-term debt in their capital structure. This may resulted due to banks high lending interest rate engaged in the long term debt in Ethiopia, an increase in the level of long term debt also increases the riskiness of companies, the result also consistent with some of previous empirical studies conducted in Ethiopia. This suggests that higher leverage, both in terms of total debt and long-term debt, leads to reduced financial performance, likely due to the increased risk of financial distress and the burden of debt servicing costs.

Firm size (SIZ) emerges as a positive determinant of profitability, reinforcing the idea that larger firms benefit from economies of scale, better access to resources, and potentially lower agency costs, which collectively enhance their financial performance. Conversely, firm age (AGE) shows a negative relationship with ROA, indicating that older firms may face challenges such as organizational inertia and outdated processes, which can diminish their profitability over time. Asset tangibility (ATA) also negatively affects ROA, implying that an over-reliance on tangible assets may reduce operational flexibility and efficiency, leading to lower returns. Sales growth (GRO), on the other hand, is positively associated with profitability, underscoring the importance of expanding sales and market share as drivers of financial success.

The analysis further reveals that liquidity (LIQ) and inflation (INF) do not have a significant impact on ROA, suggesting that these factors are not primary concerns for the firms in the study. This could indicate effective management strategies that mitigate the potential negative effects of low liquidity and inflationary pressures.

Overall, the study highlights the critical role of capital structure, firm size, age, and sales growth in determining the financial performance of food and beverage manufacturing companies in Addis Ababa. The findings underscore the importance of strategic financial management in optimizing profitability, particularly in managing debt levels and leveraging firm size and growth opportunities.

5.3 Recommendations

Based on the major findings and conclusions reached, the following recommendations are proposed for improving the financial performance of large food and beverage manufacturing firms in Addis Ababa.

- **Optimize Capital Structure:** Firms try to carefully manage their leverage, particularly by reducing reliance on excessive debt, both in terms of total debt and long-term debt. This can be achieved by prioritizing internal financing and equity over debt to avoid the risks associated with high leverage, such as financial distress and increased interest obligations.
- **Average Firm Size:** Larger firms will continue to capitalize on their size advantages by expanding operations, improving operational efficiency, and exploring economies of scale. Smaller firms should aim to grow strategically, possibly through mergers, acquisitions, or partnerships, to achieve similar benefits.
- **Focus on Sales Growth:** Firms try to invest in strategies that drive sales growth, such as product innovation, market expansion, and customer engagement initiatives. Increasing sales not only directly enhances profitability but also provides additional resources for reinvestment and debt reduction.
- **Modernize and Innovate:** Older firms will focus on modernization efforts, including updating technologies, processes, and management practices to stay competitive and mitigate the negative impact of aging on profitability. Continuous innovation and adaptability are key to maintaining long-term financial performance.
- **Balance Asset Investment:** Firms be able to adopt a balanced approach to asset investment, ensuring that investments in tangible assets are aligned with operational

needs and do not hinder flexibility or efficiency. Consideration should be given to optimizing the use of existing assets rather than over-investing in new tangible assets.

- **Maintain Effective Liquidity Management:** While liquidity did not show a significant direct impact on profitability, firms should still maintain a prudent liquidity management strategy to ensure they can meet short-term obligations and navigate periods of financial uncertainty without compromising profitability.

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Appendixes

Appendix I Test for Fixed effects Versus Random effects

```
. hausman fe re
```

	Coefficients			
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fe	re	Difference	S.E.
dta	-.0102938	-.0072488	-.003045	.0018006
siz	.423486	.1898844	.2336016	.1649661
liq	-.0008278	-.0032346	.0024068	.0014041
ldte	-.0720073	-.0777877	.0057805	.0070681
ata	-.0751358	-.0776815	.0025456	.0062505
gro	.0010943	.0015938	-.0004995	.
age	-.0030915	-.0033279	.0002364	.0003995
inf	-.0280474	-.0121375	-.0159099	.0092517

b = consistent under Ho and Ha; obtained from xtreg B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

```
chi2(8) = (b-B)'[(V_b-V_B)^(-1)](b-B)
        =       10.44
Prob>chi2 =      0.2356
(V_b-V_B is not positive definite)
```

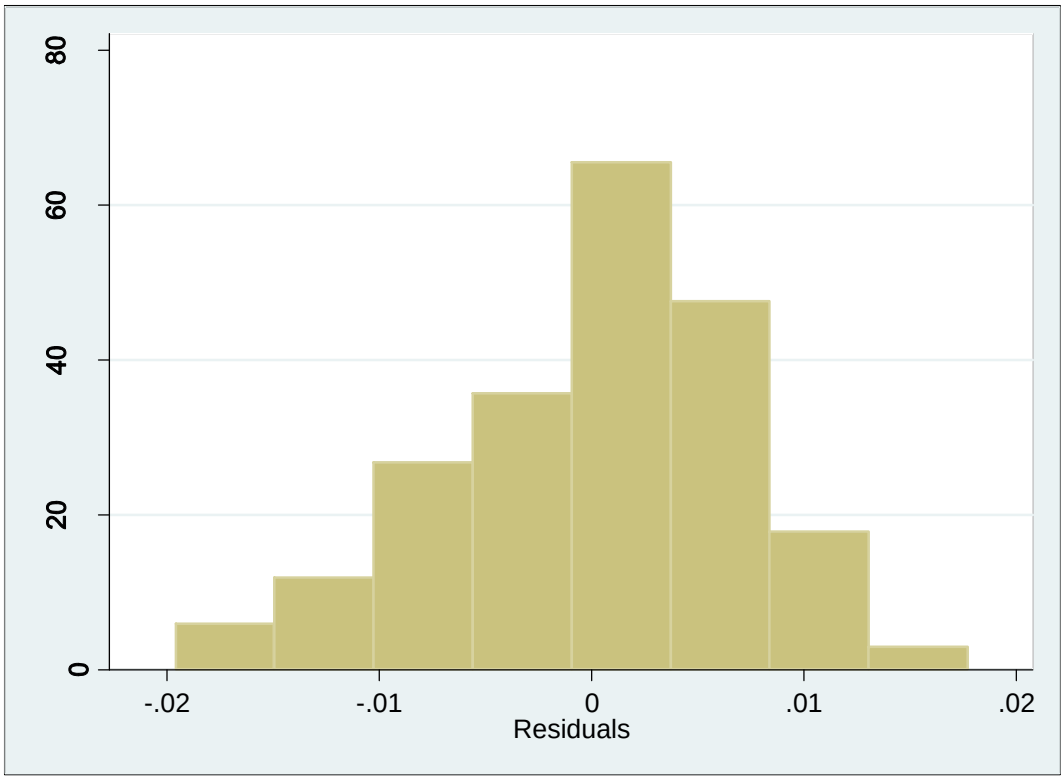
Appendix II Test of Random – effects Versus Pooled OLS

```
. xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

        roa[id,t] = Xb + u[id] +
e[id,t]         Estimated results:
                          |       Var     sd = sqrt(Var)
                 ---------+-----------------------------
                      roa |   .0003382       .0183913
                        e |   .0000485       .0069673
                        u |   9.26e-07       .0009621
        Test:   Var(u) = 0
                             chibar2(01) =     0.47
Prob > chibar2 =   0.2461
```

Appendix III Normality test



Appendix IV RAWDATA

YEAR	ID	ROA	DTA	AGE	SIZ	LIQ	LDTE	ATA	GRO	INF
2017	1	0.006703	2.61266	79	0.275744	0.210309	0.139906	0.150835	-0.00088	0.1069
2018	1	0.012571	2.54892	80	0.275031	0.508063	0.103985	0.143937	0.295416	0.1383
2019	1	0.016828	2.31524	81	0.27378	0.528531	0.097097	0.130618	0.181752	0.1581
2020	1	0.006317	2.11907	82	0.27762	0.184025	0.145702	0.106842	0.375567	0.2036
2021	1	0.010788	1.99165	83	0.278597	0.433562	0.110861	0.132865	0.191439	0.2684
2022	1	0.014931	1.9272	84	0.283317	0.508176	0.099898	0.153717	0.116951	0.347
2017	2	0.001613	1.85263	74	0.282082	0.035064	0.174491	0.20243	0.165463	0.1069
2018	2	0.016566	1.80185	75	0.284161	0.517593	0.097834	0.240948	0.232783	0.1383
2019	2	0.017484	1.6939	76	0.283894	0.577313	0.085896	0.222916	0.372641	0.1581
2020	2	0.007084	1.62967	77	0.281428	0.271295	0.123469	0.198447	0.670072	0.2036
2021	2	0.006906	1.6256	78	0.279007	0.222555	0.132697	0.204235	0.359217	0.2684
2022	2	0.000411	1.48982	79	0.280008	0.003917	0.193103	0.254914	0.539067	0.347
2017	3	0.036268	1.44471	68	0.25902	0.692191	0.019093	0.135135	0.090121	0.1069

2018	3	0.023983	1.42657	69	0.264146	0.508063	0.069	0.131927	0.212194	0.1383
2019	3	0.051743	0.018831	70	0.267643	0.528809	0	0.102573	0.513447	0.1581
2020	3	0.042267	0.203171	71	0.273232	0.138897	0.008366	0.131927	0.313799	0.2036
2021	3	0.046891	0.148393	72	0.279987	0.46952	0	0.126678	1.17159	0.2684
2022	3	0.05603	-0.29962	73	0.287019	0.555113	0.113575	0.098831	0.79398	0.347
2017	4	0.044732	0.199364	58	0.265967	1.63672	0.003211	0.130618	0.03508	0.1069
2018	4	0.048318	0.10442	59	0.267477	0.273134	0	0.119964	0.247879	0.1383
2019	4	0.030851	1.08272	60	0.265922	0.784458	0.034824	0	0.184728	0.1581
2020	4	0.050219	0.082775	61	0.267621	0.842316	0	0.118339	0.366926	0.2036
2021	4	0.042773	0.203171	62	0.271909	0.971433	0.007741	0.131899	0.174359	0.2684
2022	4	0.031799	0.975815	63	0.274646	0.003917	0.025715	0.222916	-0.77183	0.347
2017	5	0.018445	0.963361	57	0.233138	0.603439	0.084261	0	0.059154	0.1069
2018	5	0.008774	0.896113	58	0.254605	0.384648	0.114556	0.247971	0.399195	0.1383
2019	5	0.061939	-0.50113	59	0.259795	0.035064	0	0.079196	0.295557	0.1581
2020	5	0.051874	0.018831	60	0.257744	0.619747	0	0.102433	0.177894	0.2036
2021	5	0.007631	0.821017	61	0.257001	0.273134	0.121671	0.20243	0.685629	0.2684
2022	5	0.009836	0.738971	62	0.260369	0.396017	0.113575	0.204235	0.353344	0.347

2017	6	0.011398	0.716507	55	0.231337	0.46952	0.105439	0.198447	0.105996	0.1069
2018	6	0.027403	0.710887	56	0.232957	0.384648	0.04488	0.180793	0.272878	0.1383
2019	6	0.037653	0.321981	57	0.232753	0.528531	0.016535	0.132865	0.177143	0.1581
2020	6	0.027196	0.651158	58	0.235051	1.61137	0.049195	0.247971	13.1616	0.2036
2021	6	0.02192	0.563832	59	0.249499	0.619747	0.073769	0.186686	-0.8655	0.2684
2022	6	0.023507	0.562904	60	0.260531	0.625026	0.070501	0.132477	-0.9748	0.347
2017	7	0.028661	0.460786	53	0.267008	0.210309	0.04186	0.138882	0.091015	0.1069
2018	7	0.002735	0.42445	54	0.269731	0.139293	0.155711	0.281759	0.123002	0.1383
2019	7	0.002468	0.409161	55	0.26939	0.138897	0.16	0.174936	0.197476	0.1581
2020	7	0.007662	0.321981	56	0.271204	0.2849	0.117782	0.17476	0.303469	0.2036
2021	7	0.021984	0.309283	57	0.270635	0.621198	0.072321	0.155964	1.16187	0.2684
2022	7	0.033414	0.203171	58	0.280978	0.508176	0.023168	0.139736	-0.60982	0.347
2017	8	0.046519	0.181636	47	0.26764	0.625026	0	0.12892	0.076644	0.1069
2018	8	0.062607	-0.72529	48	0.295372	0.517593	0.093544	0.045554	0.342094	0.1383
2019	8	0.027218	0.148393	49	0.278609	0.713262	0.046363	0.167962	0.225034	0.1581
2020	8	0.066222	-1.25015	50	0.288904	0.765979	0.085896	0.067396	1.1311	0.2036
2021	8	0.050598	0.082775	51	0.294312	0.733056	0	0.115625	0.20878	0.2684

2022	8	0.041282	0.309283	52	0.295787	0.75176	0.008539	0.132477	-0.92323	0.347
2017	9	0.028737	0.018831	41	0.270032	1.26555	0.038671	0.102011	0.511213	0.1069
2018	9	0.032126	-0.29962	42	0.274213	0.621198	0.025528	0.079982	0.290925	0.1383
2019	9	0.051495	0.043803	43	0.275881	0.634735	0	0.106842	0.218659	0.1581
2020	9	0.062607	-0.56905	44	0.282609	0.616662	0.155711	0.073038	0.46088	0.2036
2021	9	0.06154	-0.34105	45	0.289093	0.577313	0.076888	0.079982	0.149186	0.2684
2022	9	0.04349	0.199364	46	0.292577	0.603439	0.006605	0.131275	1	0.347
2017	10	0.065222	-0.89467	25	0.28132	0.612526	0.018135	0	0.071974	0.1069
2018	10	0.021195	-0.89467	26	0.294312	0.616662	0.076888	0.240948	0.144305	0.1383
2019	10	0.061939	-0.36533	27	0.292178	0.863304	0.026871	0.055727	0.037041	0.1581
2020	10	0.017	1.00089	28	0.295372	0.528809	0.093544	0.20243	0.130484	0.2036
2021	10	0.054752	0.018831	29	0.30035	0.996225	0	0.102011	0.109015	0.2684
2022	10	0.03121	0.199364	30	0.30054	1.0566	0.026871	0.182173	0.166923	0.347
2017	11	0.037498	0.321981	21	0.235814	1.84199	0.018135	0.134991	0.04643	0.1069
2018	11	0.010797	1.4114	22	0.242548	0.448759	0.108895	0.118339	0.232029	0.1383
2019	11	0.010571	1.44471	23	0.250314	0.403672	0.112	0.079196	0.257266	0.1581
2020	11	0.026969	0.651158	24	0.250183	1.92931	0.062314	0.073038	0.107081	0.2036

2021	11	0.029504	0.321981	25	0.252735	1.92931	0.036031	0.055727	0.081844	0.2684
2022	11	0.019486	0.896113	26	0.253606	0.612526	0.080836	0.045554	0.181844	0.347
2017	12	0.015898	1.22559	15	0.261793	0.509155	0.09903	0.198447	0.031627	0.1069
2018	12	0.017138	0.984476	16	0.269188	0.555113	0.089381	0.126678	-0.09576	0.1383
2019	12	0.026924	0.693844	17	0.267415	1.04158	0.066961	0.204235	0.718073	0.1581
2020	12	0.035406	0.082775	18	0.266008	0.938453	0.022367	0.138882	0.197201	0.2036
2021	12	0.031176	0.203171	19	0.266168	0.978989	0.027038	0.135135	0.552499	0.2684
2022	12	0.025806	0.710887	20	0.270641	0.978989	0.067284	0.102433	0.584126	0.347

ID No	companies	Year of establishment	Products	address
1	Khality Food S.C	1938	Wheat based products	Akaki khality subcity A.A +251114390157
2	Awash Wine S.C	1943	Axumite, Awash wine, Gebeta, Red and White wine	Lideta subcity A.A 0113201391
3	BGI-Ethiopia private company	1949	Wine, castel and st.george beer	Lideta subcity A.A +251115515196
4	East Africa Bottling S.C	1959	Soft drink(tonic) and mineral water	Lideta subcity A.A 0112756382
5	Shoa Bakery and flour factory plc	1960	Food retailer and bakery	Bole subcity A.A +251114655165
6	Faffa food S.C	1962	Faffa, cerifam, famix, edget milk, dube duket, corn etc.	Akaki khality subcity A.A 0114403976

7	**Heinken S.C**	**1964**	**Harar, Bedele and Walia**	**Khality subcity A.A**
8	Sugar corporations S.C	1970	0115151214	Bole subcity A.A 0115151214
9	National Alcohol and liquor factory	1976	Alcohol and related products	Kirkos subcity A.A 0115516999
10	Misrak flour and bread	1992	Bread and cake products	Kirkos subcity A.A +251114655344
11	Moha soft drinks S.C	1996	Pepsi-cola, Mirinda orange, 7up mirinda tonic, Mirinda Apple, cool	Lideta subcity A.A 0112750122
12	Kojj food and bread Complex	2002	Wheat flour and biscuits	Kolfe Keraniyo A.A +251911246290