

**EFFECT OF FINANCIAL STRUCTURE ON FINANCIAL PERFORMANCE OF
LOCAL AIRLINES IN KENYA**

BY

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MASTER OF SCIENCE IN COMMERCE (FINANCE AND ACCOUNTING)

KCA UNIVERSITY

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
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IN COMMERCE (FINANCE AND ACCOUNTING) IN THE SCHOOL OF SCHOOL
OF BUSINESS AT KCA UNIVERSITY**

OCTOBER, 2023

DECLARATION

I hereby affirm that this dissertation represents my own unique work and has not been previously published or submitted elsewhere to obtain a degree. I thus affirm that the content presented below does not consist of any material authored or published by individuals other than myself, unless proper attribution is provided and the author is officially recognized.

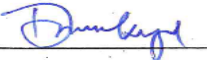
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DEDICATION

I dedicate this research project my late Grandma, Pasckaliah Mong'ina and my late aunt Emily Nyareso for the good thoughts they had towards my academic life and their prayers before passing away. My success on this academic journey will be a way of making them happy.

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ABSTRACT

The GDP contribution of the local airlines in Kenya has varied over time, with a 0.8% contribution in 2022, 0.6% contribution in 2021, 0.4% contribution in 2020, 0.3% contribution in 2019, and 2018 a 0.5% contribution (KNBS, 2022). In addition, the local airlines growth has been erratic, declining by 0.3% in 2022, 1.1% and 1.4% in 2021 and 2020, respectively. Even though the local airlines' growth in Kenya is erratic, their profitability has been declining as evidenced by the fact that the reported net loss was Kshs 9 billion in 2022 compared to Kshs 8.1 billion in 2021 and high debt financing of Kshs 24 billion. The main objective of this study was to determine the effect of financial structure on financial performance of local airlines operating in Kenya. The specific objectives that guided this study were to establish the overall effect of short-term debt, to determine the effect of long-term debt, to investigate the effect of retained earnings, to analyse the effect of equity capital and investigating the moderating effect of the firm size on the relationship between financial structure of the firm and its financial performance of local airlines operating in Kenya. This study was anchored on trade-off theory, capital structure irrelevant theory, pecking order theory, Modigliani and Miller theory, and resource based theory. The study adopted correlational research design that was based on a target population of twelve local airlines that operate in Kenya. The secondary data for this study was collected through the help of secondary data collection sheet from the published accounts of the local airlines in Kenya or from their websites. Data was descriptively and inferentially analysed using STATA version 16. It is evident from the result that there is a significant effect caused by the short term debt on the financial performance of the local airlines operating in Kenya ($\beta = 0.222, p = 0.035 < .05$); While there is a negative significant effect when the airlines uses the long term debt to finance their operations ($\beta = -0.390, p = 0.001 < 0.05$) on financial performance; there is a positive significant effect when the firm uses their retained earnings as a means of funding their operations on its financial performance ($\beta = 0.482, p = 0.000 < .05$) of the local airlines; on the other hand, there is a negative significant effect on the financial performance when the airlines are funded by their share capital ($\beta = -0.578, p = 0.044 < .05$) on financial performance of the local airlines holding all other factors constant; the firm size is also a significant moderator of the relationship that exists between financial structure of the local airlines and their financial performance.

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ABBREVIATION AND ACRONYMS

KCAA: Kenya Civil Aviation Authority

IATA: International Air Transport Association

GDP: Gross Local Product

FTK: Freight Per Kilometer

RPK: Revenue Per Kilometer

MM: Modigliani and Miller

STATA: Statistical Software of Data Science

ROA: Return on Assets

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

As per the World Bank (2018), the aviation industry globally provides approximately, 2.7 trillion dollars, or 3.6%, of the global GDP. However, due to shifting fuel prices, inflation, and general economic conditions, the aviation sector has seen erratic tendencies in its financial performance (ICAO, 2018). The infrastructure needed to support the increased traffic in the aviation industry is not keeping up. To enable the essential infrastructural investment, it is prudent for the local airlines in Kenya to have adequate finances for its operations and use them effectively (Yegon, 2014).

The International Air Transportation Association (IATA) reports that since 2014, various airlines globally have been able to attain a high net profit margins compared to past years. However, in the last five years between 2017 and 2022 airlines worldwide have posted declining net profit margins figures. According to Arne & Nursen (2018), this was mostly due to the notable rise in the number of passenger from roughly 2.10 to 4.30 billion, which is approximately 100% increase. Although the rise in passengers was intended to help the airline industry, many carriers have shown declining financial performance (Kasomba, 2020).

Local airlines have been shown to have different financial performance in different countries. For example, in Turkey, the corporation concentrated on using effective aircraft to control the increasing cost of fuel. It has been noted that, the performance of local aviation has decreased in the last five years (Anshu, 2020). This demonstrates that the fleet is relatively young compared to those of the company's primary competitors. The increased level of operational activities helps the business save money on fuel and operate more effectively thus, preventing a sharp decline in profits (Okeyo, 2022). Financial figures for the 2021–2022 fiscal year show that Singapore Airlines had a high operating profit of 585.1 million dollars, up to 44.6% over the prior year. IATA estimates that Asia Pacific would have a \$10 billion loss in 2022, and its

outlook for 2023 appears bleak. In the region, passenger demand growth of 59.8% is anticipated to exceed capacity expansion of 47.8% in 2023 (Chege, 2021).

According to the IATA (2022), Africa's local airlines is particularly vulnerable to macro-economic influences that have made it difficult to operate and raised the vulnerability to some economies. For example, African airlines reports show that local airlines have reported a loss of \$638 million for the year, compared to the Latin American region's loss of \$2 billion. Africa is the weakest region because of the \$300 million net loss that African local airlines reported in 2019, which was an improvement in terms of earnings from the \$400 million net loss that they earned in 2018 (AFRAA, 2018). This is because, while international airlines struggle to turn a profit, many African local airlines collectively make enormous losses. The South Africa local airline reported R62.3 billion as total revenues in 2022 compared to the revenue of the same local airline of R87 million in 2021, which was a decrease of R14.7 (Anshu, 2020).

More specifically, Bourjade & Muller (2017) study in Africa indicated that strategic alliances are created to lessen uncertainty for the alliance's participants. While mergers and joint ventures were used to some extent. However, there was no correlation between strategic alliances and airline financial performance. Instead, strategic alliances with other airlines and acquisitions were heavily used. To manage the airline business, governments and hospitality industry participants in most African nations must currently address the following problem: utilizing the advantages of the digital transformation. That is, both the airline business and policymakers must adapt to the rapid advancement of technology (Musangi, 2021).

According to Hassan (2018), the local airlines in Kenya facilitates both people and cargo transportation services. The local airlines use commercial and cargo planes to provide the transportation services. Occasionally, the local airlines in Kenya joins forces with other

airlines operating locally to facilitate their services through a code sharing arrangements. Local airlines in Kenya have encountered several issues related to financial performance. For instance, the market pressure on cargo is anticipated to intensify in 2023. The predicted revenue is \$149.4 billion, which is \$48.6 billion less than 2019 and \$52 billion less than 2022. Due to the uncertain economy, volumes cargo is predicted to drop from a quantity of 65.6 million tonnes in 2021 down to 57.7 million tonnes in 2022. Yields are anticipated to significantly decline when the impact of inflation-cooling measures is anticipated to bite. IATA predicts a decline in cargo yields by 22.6% (Anshu, 2020). Despite the fluctuating growth of local airlines, their financial performance has been declining, as evidenced by their net loss of Kshs. 18 billion in 2022 compared to Kshs. 17.1 billion in 2021 (IATA, 2023)

1.1.1 Financial Structure

Financial structure encompasses the combination of both equity and debt that most companies utilizes to finance their operations. Lenders and investors facilitate these companies with finances in form of debt capital that they repay back with an interest at an agreed rate. Shareholders receive returns on their equity in the form of distributions or growth in market value in return for their investment. This is made up of equity capital in the form of ownership in the business. The local airlines in Kenya use a distinctive mix of debt financing and equity financing depending on their needs, expenses, and investors' demand (Okeyo, 2022). For example, Abbas (2020) used debt financing to assess the financial performance of airlines in Pakistan. Vaasa (2023) used ownership structure to determine the financial performance of Ethiopian Airlines, Lidovolo (2023) used long-term financing to construct financial structures of local airlines operating in Kenya. To assess how viable, the local airline in Kenya is, Kusomba (2020) used lease finance, equity financing, loan financing, and retained earnings. These research made an effort to look at the financial structure's

components. The current study evaluated the effect of financial performance of local airlines operating in Kenya by combining the financial structures of short-term debt financing, long-term debt financing, retained earnings, and equity capital.

Financial structure involves the collection of many long-term sources of finance and short-term sources of finance while capital structure entails a collection of only long-term financial sources. Abbas *et al.*, (2020) found that businesses with greater form of investment and development opportunities choose share funding over debt associated with ongoing interest payments. This is because share funding improves the financial structure of the business, which benefits shareholders. The organization's financial structure consists of both long-term financial instruments and short-term financial instruments (Karuma, 2023).

The financial structure includes all the elements that are presented as liabilities in the statement of financial position at the year-end (both equity and preference), debentures, bonds, loans (long and short term), and retained earnings are posted as an asset in the statement of financial position as a non-current asset hence, the capital structure element. The business receives these monies from people and organizations to support and expand its activities. Despite that, local airlines in Kenya rely on raising funds to support and successfully manage their operations, notwithstanding the variations between capital structure and financial structure. Local airlines in Kenya should ensure that, they must employ adaptable financial structure, to cushion the industry against shifting industrial conditions. The financial structure adopted by local airlines should be stable enough to reduce the risk of bankruptcy at the same time (Alhyari, 2015).

1.1.2 Financial Performance

According to Nassar (2016), financial performance is a form through which an organization's performance is evaluated, that is, though, profits, earning and its value as shown by an

increase in the price of its stock. How effectively a local airline uses its current and non-current assets to create money from its core business activities is measured by financial performance, which is a subjective metric. Financial performance is a gauge of local airlines general financial health over a predetermined time. Amaech *et al.*, (2022) argue that the financial Performance of the local airlines is measured by net profit margin, gross profit margin, profitability, annual turnover, returns on investment (ROI), and also return on equity (ROE). According to Lesivan (2017) the financial performance of an airline is evaluated by its service level, profitability, revenue per kilometer (RPK), and freight per kilometer (FTK). Following the financial crisis globally that led to an international lockdown of the air space due to the COVID-19 pandemic, the aviation sector has faced challenging times in terms of financial performance (Anthal, 2012)

These measurements are categorized under the investment performance metrics and the profit performance measures (Khamasi, 2020). The financial performance of local airlines is usually analyzed in monetary terms. Financial performance is appropriate since funding of local airlines to accomplish their objectives in this dynamic and fiercely competitive global climate will be dependent on how the local airlines utilizes their cashflows (Okeyo, 2022). According to Musangi (2022) financial performance is crucial in convincing shareholders and policyholders to contribute money to local airlines. Thus, financial performance is a fundamental prerequisite for ensuring that local airlines remain on course with the competitive environment. This research employed return on assets as the financial performance measure since this measure will indicate the contribution of sh1 of revenue to the value of assets in the local airlines and it will help this study to effectively draw conclusions about the research study (Lidovolo, 2023).

1.1.3 Firm Size

The debate regarding the connection between the firm size and financial performance has been ongoing since the formulation of Gibrat's (1931) hypothesis, which suggested that a firm's growth rate is independent of its size. According to Niresh and Velnampy (2014), the size of a firm plays a significant role in determining its financial performance, as it emanates from the neo-classical perspective of the economies of scale concept. Akinyomi and Olagunju (2013) further emphasize the importance of firm size in today's business environment, where economies of scale can provide larger firms with a competitive advantage in terms of cost leadership. Organizations view firm size as a valuable resource for achieving sustainability in the competitive advantage in terms of profitability and market share. However, Ramasamy, Ong, and Yeung (2015) note that the relationship between firm performance and firm size is not straightforward and caution against generalizing findings across industries. They recommend taking an industry-specific approach to analysis and avoiding the tendency to draw broad conclusions.

Several studies have used firm size as a moderator. While there seems to be a moderating effect of firm size on various factors and financial performance, there is no empirical evidence supporting the moderating effect of the firm size on the relationship that exists between the financial structure of local airlines in Kenya and their financial performance.

1.1.3 Local Airlines in Kenya

Local airlines in Kenya are those that carry both passengers and cargo within the national boundaries. Many local airlines operate flights between Kenya's major cities like, Nairobi, Mombasa, Kisumu, Eldoret, etc. and most of the exotic safari locations. In Kenya there are twelve local airlines, (Appendix II). These local airlines are faced by challenges including declining market industry, high cost of fuel, increased demand for the safety records, the

increased demand for the skilled personnel, internal liberalization, and constant rise on the amount of taxes charged (Chege, 2021).

The local airlines in Kenya have been characterized by operational extravagance and poor means of financial performance (Shikumo, 2020). The carriers from Europe and the Middle East presently control most of the airspace above Kenya, according to IATA publications (2019) on the Airline Industry's status. The local commercial airlines have undergone restructuring because of the intense competition, and some flights have even been cancelled to reduce costs and stay competitive (Divekar, 2021).

Due to numerous defeats, Kenyan airline companies now employ survival measures like decreased pricing, better planned route plans, time management on departures, comfortable seats, and improved customer service. However, despite employing these tactics, Kenyan operators have continued to post poor financial results in recent years, which can be attributed to globalization, market liberalization, and market consolidation in Africa (Saha, 2021). With a total of twelve local airlines licensed and operating with Kenya's jurisdiction, the local aviation sector in Kenya has not expanded over the past five years (Musangi, 2022).

1.2 Statement of the Problem

The analysis of a company's financial structure reveals details about its cost of capital and leverage (Kangogo, 2016). It could be used by investors to evaluate the organization's level of risk and leverage. A company's financial structure, which is used to finance its assets, consists of a combination of short-term debt financing, long-term debt financing, retained earnings, and equity capital. Because the corporation holds less shares, a heavy reliance on debt financing allows shareholders to realize a greater return on investment (Maiyo, 2013).

The best financial structure maximizes market value while minimizing a company's cost of capital. This can be achieved through the combination of both loans and equity financing.

Local Airlines in Kenya have a rigid financial structure due to the nature of financing they adopt. Many local airlines in Kenya experience financial performance issues as a result of the incorrect financial structure mix (Kusomba, 2020). In most cases local airlines in Kenya increase their debt while maintaining their equity, which increases their risk of insolvency (IATA, 2017). Local airlines in Kenya have been reporting poor financial performance for the last five years. The problem of declining financial performance of local airlines has affected the GDP and the economy in general. The GDP contribution of the local airlines in Kenya has varied over time, with a 0.8% contribution in 2022, 0.6% contribution in 2021, 0.4% contribution in 2020, 0.3% contribution in 2019, and 2018 a 0.5% contribution (KNBS, 2022). In addition, the local airlines growth has been erratic, declining by 0.3% in 2022, 1.1% and 1.4% in 2021 and 2020, respectively (Musinga, 2022). Even though the local airlines' growth in Kenya is erratic, their profitability has been declining as evidenced by the fact that the reported net loss was Kshs 9 billion in 2022 compared to Kshs 8.1 billion in 2021 and high debt financing of Kshs 24 billion. This phenomenon has affected the Kenyan economy adversely. If the problem is not solved it will result to high unemployment rates leading to stagnation in the whole economy (Lidovolo, 2023).

There is empirical evidence connecting financial structure to the financial performance of local airlines operating in Kenya. For example, Djoko (2017) studied ownership structure and the listed airline industry's financial performance in Asia and Australia. The study focused on the ownership and size of the firm as the sub-constructs of the independent variable. Sewunet (2017) investigated the determinants that supports capital structure of the airline industries: Case of the major airlines of sub-Saharan Africa. The study focused on internal factors and macroeconomic factors in assessing elements of capital structure. Hassan (2018) examined the effect of capital structure on the financial performance of all airlines operating in Kenya. This study concentrated on the capital structure of KQ airways which was a case of one

airline operating in Kenya. This study did not consider all the airlines in Kenya. The study focused on debt capital and equity capital as the only components of a firm's capital structure. Hence the current study bridged the knowledge gap that exist between these two studies. Lidovolo (2023) studied the effect of the long-term debt financing of commercial airlines operating in Kenya on their profitability.

The literature that is available shows that local airlines in Kenya have been performing poorly over time. Interventions made have not been effective in improving the financial performance of local airline firms. Several studies have been conducted both in Kenya, in Africa and globally on financial structure and the financial performance of local airlines. However, elements like short-term debt, long-term debt, retained earnings and equity capital on the financial performance have not adequately been explored in the already concluded studies. Since the studies have revealed several gaps, the current study therefore sought to bridge these gaps by investigating the effect of financial structure on local airlines operating in Kenya's financial performance. Moreover, since previous studies have shown mixed outcomes on the effect of the firm's financial structure on their financial performance, the study used firm size to moderate the relationship. Firm size has been shown to mediate various relationships in different studies.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of this study was to determine the effect of financial structure on financial performance of local airlines in Kenya.

1.3.2 Specific Objectives

As per the above general objective, the specific objectives of this study were:

- i. To establish the effect of short-term debt on financial performance local airlines in Kenya.
- ii. To determine the effect of long-term debt on financial performance of local airlines in Kenya.
- iii. To investigate the effect of retained earnings on financial performance of local airlines in Kenya.
- iv. To analyse the effect of equity capital on financial performance of local airlines in Kenya.
- v. To establish the moderating effect of firm size on the relationship between financial structure and financial performance of local airlines in Kenya.

1.4 Research Hypotheses

H₀1: Short-term debt has no significant effect on financial performance of local airlines in Kenya.

H₀2: Long-term debt has no significant effect on financial performance of local airlines in Kenya.

H₀3: Retained earnings has no significant effect on financial performance of local airlines in Kenya.

H₀4: Equity capital has no significant effect on financial performance of local airlines in Kenya.

H₀5: Firm size has no moderating effect on the relationship between financial structure and financial performance of local airlines in Kenya.

1.5 Significance of the Study

1.5.1 Local Airline Companies

The primary user of the results of this study will be the local airline operating in Kenya. The local airline companies will use the findings and suggestions to better understand how they can improve their financial performance. The study results will also help these local airline companies to find areas for improvement, cut costs, and decide on future expenditures. Additionally, the study will inform the local airlines about the market trends and how to benchmark their financial performance against industry standards.

1.5.2 Regulators of Local Airline Companies

The study results will be of value to regulators of local airline companies since it will inform them about the complex interaction of variables, including fuel prices, competition, the state of the economy, labor costs, capacity utilization, ancillary income, and regulation that affect the financial performance of the local airlines.

1.5.3 Students and Academicians

The study will be important for academicians and students in the field of finance as well. Students will use the entire paper in the future as their reference guide, and or even just its findings and recommendations, as secondary data to conduct a related study and use it as a benchmark for subsequent research.

1.6 Scope of the study

The study investigated the effect of financial structure on financial performance of local airlines in Kenya. This study will also help at determining the impact of short-term debt financing, long-term debt financing, retained earnings, and equity capital on the financial

performance of Kenyan local airlines as one of the study's particular objectives. This study will be based on the following theories, Trade-off theory, pecking order theory, capital structure irrelevant theory, Modigliani and Miller theory, and resource based theory.

The study reviewed the existing literature to uncover the theoretical and empirical gaps that exist among the already concluded studies. The study was quantitative research and employed a correlational research design. Accessible target population under study was 12 local airlines that were operating in Kenya as of July 2023. The study employed census survey as the sampling technique in collecting secondary data that was drawn from the published financial records of the local airlines in Kenya obtained from the airline websites for a period of seven years (2016-2022). This study obtained the above mentioned, secondary data using secondary data collection sheet.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Literature review presents the review of theories that the study was anchored on, empirical review of the previous studies related to the study which provided common arguments among the previous scholars whereby the study linked the arguments of the scholars with the current research study, conceptual framework that portrayed the connection between independent and dependent variables being studied, and operationalization of the study variables which showed how the study variables were measured.

2.2 Theoretical Review

This section consists of theories this study is anchored on, thus making it more meaningful and generalizable. The theories that underpin this research study included trade-off theory, pecking order theory, Capital structure irrelevant theory, Modigliani and Miller theory and resource based theory.

2.2.1 Trade-off Theory

This theory was postulated by Kraus & Litzenberger in 1973. The trade-off theory which was later made popular by Myers (1984) and Frank & Goyal (2005). Some of the Modigliani and Miller (1958) theory's assumptions were relaxed by the trade-off theory, particularly the ones regarding taxes, transaction costs, distress costs, and agency costs. Theorists also argued that while determining the amount of debt or proportions to be used in financing operations, one should focus on the trade-off that exists between the marginal benefits of higher debt increases and the marginal costs of rising debt.

The theory supports the independent variable: short-term debt since local airlines should take advantage of tax benefits of short-term loans (Khamasi, 2020). Trade-off comes from the

opportunity cost decision. The local airline should decide between borrowing money through indebtedness, which has numerous negative effects for the airline (Sakthidharan & Sivaraman, 2018). The approach places a focus on the costs that the business must consider before beginning to employ the short-term debt.

Kasomba (2020) asserts that the trade-off theory dictates that a local airline should borrow when the marginal cost of borrowing is less than the current value of the company. This will protect the local airline from financial distress. However, the trade-off theory can be criticized on overemphasis on tax advantages. The trade-off model underpins that borrowing money on credit is advantageous since the interest payable is tax deductible. However, this may not always be the case in all debt financing. In some instances, the tax deductible advantage for borrowing money on credit may be outweighed by higher interest rates charged on debts or other expenses (Shikumo, 2020).

2.2.2 Capital Structure Irrelevant Theory

The theory was postulated by MM in the year 1958. According to the theory, in an ideal world, a company's value is distinct from its capital structure or financing strategy it chooses (Musangi, 2022). The financial instruments and securities that a company issues in the market have no connection with the company's value. The theory assumes that financing decisions have little bearing on investment choices because operations' revenues are unaffected by how the airline is financed. The theory further assumes that both borrowing and lending are risk-free. The theory supports dependent variable long-term debt since the local airline capital structure does not necessarily need to be inform debt. This theory is helpful in analyzing how long-term debt financing affects the profitability of local airlines in Kenya (Divekar, 2021)

This theory is valid in a perfect world where there is no corporate income tax, no transaction costs, no information asymmetry, no different risk classes of firms, all cash flows are perpetual, and there are only two types of securities issued by the company that is debt and equity. However, the theory can be criticized on grounds that most of these presumptions do not hold because local airlines must pay taxes and transaction fees. Local airlines must cover the costs of transaction when offering securities to the market. The capital structure irrelevant theory over emphasizes on capital expenses, corporation taxes, and other transaction costs. These elements may have negative significant influence on the financial performance of local airlines (Chege, 2021).

2.2.3 Pecking order Theory

The theory was postulated by Myers & Majluf in the year 1984. The theorists agreed that because of knowledge asymmetry, businesses usually decide to fund their investments using their income first (retained earnings). When internal finance is insufficient, local airlines can use long term debt first before using equity financing (Lidovolo, 2023). The variable, retained earnings will be supported by the theory, to underpin the already available literature. According to the pecking order idea, local airlines can adopt the order of capital preference to finance their operations. The order of choices acts as a reflection of the relative costs associated with the various funding options available to the local airline (Lislevand, 2012). Given the existence of data asymmetries that exists between the local airlines and potential lenders, the relative cost of financing varies from the choice of financing. As a result, it is more expensive for the local airline to raise finances from issuing new share than to use retained earnings. Local airlines prefer to finance their operations through internal and external sources. However, a limited amount of external financing can be obtained by issuing equity for reinvestment and fundraising objectives. The pecking order theory states that local

airlines will use retained earnings over equity more frequently (Kahvya 2015). Local airline profitability will significantly be impacted by the capital structure it selects (Huang, 2021). The basic premise of the pecking order theory is that investor knowledge asymmetry and long-term debt management affect leverage decisions.

Since investors views equity (stock) issuances negatively, most local airlines prefers financing their operations through retained earnings, followed by debt, and then fresh equity, if all other options have been exhausted (Divekar, 2021). Pecking order theory, however, might be criticized because it is purely theoretical and cannot be used in the real world. The theory limits the available funding possibilities, and it cannot be expanded to include cutting-edge funding methods. Additionally, the fairly archaic thinking does not take into account contemporary financial fundraising strategies.

2.2.4 Modigliani and Miller Theory

This theory was postulated by MM in the year 1958. According to this theory, regardless of the company's capital structure, the market value of a company may be reliably calculated as the present value of its anticipated future earnings and the company's underlying assets (Musinga, 2022). The theory assumes that there are no taxes, borrowing costs are the same for businesses and individuals, and financing decisions have no influence on investment choices. The theorist postulated two prepositions. Their initial argument was that a local airline's value is unrelated to its capitalization. The second assertion states that the cost of equity for a leveraged local airline is equal to the cost of equity for an unleveraged local airline plus an additional premium for the financial risk (Chege, 2021).

The theory supports the independent variable equity capital. The core idea of MM is that any combination of financial structure is equally effective (Kasomba, 2020). Therefore, MM theory is used in this study since the capital structure a local airline uses has an impact on its

financial performance. However, MM theory has drawbacks, including imperfect markets, no transaction costs, floatation expenditures, the uncertainty associated with future capital gains, and the demand for immediate pay-outs.

2.2.5 Resource-based theory

The theory was postulated by Barney, in the year 1991, with the aim of proving that the firm size is dependent on the amount of resources and organization owns. It also portrays that the firm's resources help to define the firm's competitive advantage over other firms. As per the resourced based theory, a firm's competitive advantage is evaluated through the help of tangible and intangible non-current assets. Some of these resources are presumed to be lacking in upcoming or small organizations (Barney, 1991). For the competitive advantage to be of essence, the mentioned resources are to be rare, rated highly in the market, substitutable and imitable. This is a sure way the bigger the firm size in terms of resources, the higher the competitive advantage. This theory supports the firm size that is the moderating factors that supported the study to investigate the relationship between financial structure of local airlines operating in Kenya and their financial performance. As per, Peteraf, (1993), the resources of the organization are owned by the shareholders. This brings a clear cut difference between the already existing airlines to the upcoming. It's clear that the two airlines cannot possess equal amount of resources, thus the difference in the structural design in terms of financial performance and its financial structure.

Hamel and Prahalad, (1990), argued that, the firm's competitive advantage would be based on core development competencies. This means that even the upcoming local airlines can possess a strong competitive advantage compared to the already existing airlines. However, it's evident in the Kenya financial industry, that firms with more resources are likely to access more finances. This is because, they can use some of them as collateral while

obtaining debt financing. Firm size is, therefore, a moderating factor in the airline industry's financial structure and financial performance measures in terms of debt acquisition. However, the firms depicted to be smaller in size in terms of resources, can exploit available market options in order to acquire more resources (Hamel and Prahalad, 2000).

2.3 Empirical Review

Empirical review covered a discussion on the review of previous research studies that are related to the variables under study. The studies reviewed related to short-term debt financing, long-term debt financing, retained earnings, equity capital and firm size as a moderating factor on the financial performance of local airlines.

2.3.1 Short-term Debt and Financial Performance

Divekar (2021) assessed the financial performance of India Aviation industry by using Altman's Z-Score Model and Pillar skis P- Score model. The study was carried out using descriptive research design. The data for the study was collected by the help of secondary data collection sheet from published financial accounting records of India's four largest airline companies. This study used inferential statistics and descriptive research design to analyse the secondary data collected. Regression and correlational studies were employed to determine the degree of the relationship between dependent variable and the independent variables. Analysis reveals that several financial performance aviation sectors are affected by the financial soundness of airline companies in the aviation sector in India. However, the study's methodology is different from the methodology that the current study employed. It is evident that the above study was carried out in a differing geographical location from the current research study. The current study also involved 12 local airlines in Kenya, whereas the study on Indian Airline industry, involved only four airline companies.

Okeyo (2022) studied the influence of short-term debt financing on the profitability of airlines operating in Kenya. The study employed the use of a descriptive research design. The population under study was 10 airlines in operating in Kenya. The secondary data used for the study was collected by the use of secondary data collection sheet from the published accounts. Both inferential and descriptive statistics were used in the analysis of the secondary data with the aid of STATA version 15. Tables and figures were used to present data. The study revealed that long term debt financing, short-term debt financing, retained earnings and the share capital positively influences the financial performance of airlines in Kenya. However, the study's target population was not the same as the current study's target population and this results to a methodology gap that the current study sought to fill.

Karuma (2023) investigated the effect of debt financing on financial performance of listed manufacturing firms in Kenya. Descriptive research design was used for this study. The study's target population was nine manufacturing firms that are listed in NSE from the year 2013 to 2017. The data for the study was collected using secondary data collection sheet. Inferential and descriptive statistical methods were used to analyzed the data for the study. Linear regression model was used to study the connection between the independent variables and the dependent variables. It was evident from the study results that the financial performance of listed manufacturing firms in Kenya are positively and significantly affected by debt financing. However, the study can be criticized on the grounds that it was carried out in manufacturing firms which are different from local airlines. Hence the results of the current study may differ.

2.3.2 Long-term Debt and Financial Performance

Abbas *et al.*, (2020) examined the impact of debt financing on airline's transport industry performance in Pakistan. Descriptive research design, was employed by the study. The target

population was three airline transport companies operating in Pakistan. Data was gathered from secondary sources using secondary data collection sheet from the company's annual reports. It was evident from the study, that debt financing, has a negative impact on the airline transport industry in Pakistan. However, the study can be criticized on the grounds that the target population was too small to help the research draw representative conclusions about the variables understudy. The study was conducted elsewhere geographically than where the present study was conducted. Consequently, the outcomes of the two research could differ.

Lidivolo (2023) investigated the effect of long-term debt financing of the profitability of commercial airlines operating in Kenya. Cross-sectional research design was employed by the study. Eight airlines companies operating in Kenya were used as the target population. Census sampling technique was employed, and secondary data used for this study was collected using secondary data collection sheet from the published accounts. Descriptive statistics were made up of the mean, minimum values the Standard deviation and maximum values. While correlational analysis, the Hausman test for fixed and random effects, and the random effects models made up inferential statistics. It was evident from the study's findings that long-term debt financing has a significant and statistical impact on the profitability of commercial airlines operating in Kenya. The study used a different research design from the research design that the current study employed. Hence the results of these studies may be different.

Musangi (2022) investigated the influence of investment and financing decision on profitability of airlines in Kenya. Descriptive research design was used by the study. Ten local airline companies operating in Kenya were used as the target population. Using a secondary data collecting sheet, secondary data was gathered. Using STATA 15, descriptive statistics and inferential statistics were examined. Means and the standard deviation were

utilized in descriptive statistics. The degree of the association between the variables was determined using inferential statistics such as regression and correlation studies. The results showed that long term financing and finance decisions significantly increase the profitability of Kenyan airlines. However, the study's criticism is that the study's target population of 10 local airlines was different from the target population of 8 local airlines that the current study employed. Hence the study results may be different

2.3.3 Retained Earnings and Financial Performance

Yaghi (2015) conducted a study on comparing the performance of major airline companies by traditional and airline specific ratios and measures in Turkey. The study adopted ratio analysis with an aim of revealing specific behavior of the airline industry on the selected liquidity, profitability and leverage ratios. The target population was 17 airlines that operates in Turkey. The secondary data used for this study, was collected by the help of secondary data collection sheet from the published accounts of the airline industry. The data collected was analysed by the help of inferential and descriptive statistics. Figures, graphs and tables were used to present the analysed data. To determine the strength that exists on the relationships between the variables, correlational analysis was employed by the study. The study revealed that specific accounting ratios positively and significantly affects the performance of major airline companies in Turkey. However, the methodology that the study employed was different from the methodology that the current study employed. The study was conducted in a different geographical location from where the current study was carried out.

Demessie (2020) aimed to investigate the effect of capital structure on performance of local Airlines in Ethiopian. The quantitative research design was employed by the study. The secondary data was used for this study was collected by the help of secondary data collection

sheet from the published accounts of the airline operating in Ethiopia. As a performance indicator, ROA was used as the measure for the dependent variable, while capital structure was described using the independent variables: short term debt to total asset ratio, long term debt to total asset ratio, and total debt to total asset ratio. According to the results of the regression analysis, the ratio of total debt to assets had an insignificant negative effect statistically on the performance of the airlines operating in Ethiopian, while short- and long-term debt to asset ratios had a statistically insignificant positive influence on Ethiopian Airlines' performance. The study, however, was carried out in a different geographical location than where the current study was carried out. Consequently, the outcomes of the two research are likely to present differing results.

Khamasi (2020) carried out research on financial structure and performance of commercial airlines in operating Kenya. Explanatory research design was employed by the study. Eleven local commercial airlines operating in Kenya were sampled for the study. Secondary data was collected by the use of secondary data collection sheet, from the published financial statement of the eleven airlines under study. After data analysis, the study concluded that retained earnings financing affects the financial performance of commercial airlines Kenya negatively. However, the study used 11 airlines as the sample size and it was carried out on commercial airlines. The study did not clearly inform how the sample was drawn and what the target population was. Hence the study reveals a methodological gap which was addressed by the current study

2.3.4 Equity Capital and Financial Performance

Huang (2021) conducted a study on assessing the financial performance of airlines operating in the Asian- Pacific Region. The study used descriptive research design. The target population 22 Asia-Pacific based airlines during 2016-2019. Secondary data was collected by

the use of secondary data collection sheet from the published financial statements. Both descriptive and inferential statistics were employed for data analysis. The study concluded that capital structure statistically and significantly affected financial performance of Asia-Pacific airlines. However, the critique that can be levelled against this study is that the target population and the sample size were different and hence the results of the two studies may be different.

Kasomba (2023) investigated the effect of financial structure and financial performance of local commercial airlines operating in Kenya. Explanatory research design was employed by this study. Eleven commercial airlines operating in Kenya, made up the study sample. The sample included only commercial airlines that were registered from the year 2012 to 2018. Collected data was analysed by the use of Panel Regression technique. The study findings were that lease financing had no visible impact on the financial performance of Kenya's local commercial airlines. The share finance significantly affects the financial performance of local commercial airlines operating in Kenya. It was evident that, national commercial airlines' financial performance was significantly affected by debt financing, and national commercial airlines in Kenya's financial performance were significantly affected by the retained earnings. However, the study employed a different form of research design that is different from the current study's correlational research design hence the possibility of study's findings being different.

Hassan (2018) studied the effects of capital structure on financial performance of airlines in Kenya. Explanatory research design was employed. The study focused on one local airline, the Kenya airways. The study employed the use of questionnaire as the data collection tool. The Panel Regression technique was used for the data analysis. The study findings were that capital structure positively and significantly affects the financial performance of the Kenya Airways. However, the study focused on one objective while the current study focused on

four objectives. The study also, employed the use of explanatory research design which is different from correlational research design that was used by the current study, thus differing findings.

2.3.5. Moderating effect of firm size on the relationship between financial structure and financial performance

Malik (2011) investigated on the determinants of profitability proxied on the insurance companies, by the help of return on assets. The study used descriptive research design. The secondary data employed for the study was collected through the help of secondary data collection sheet. As per the study, there is a positive relationship between the company size and its profitability. This is evident that the assets of the company are likely to positively affect the company performance. However, the study was carried out in a different geographical location thus bringing out the gap to be bridged by the study. The study was also conducted in insurance companies, whereas, the current study was carried out on local airlines operating in Kenya.

There is a negative association in the relationship between the UK listed entities to the firm size that was exhibited as per, (Whittington, 1980). This is because, an increased firm size, leads to increased bureaucracies which delays operations, thus low performance. The inefficiencies caused by a bigger company, are way different from the growing company. Large company's operations may end up affecting their profitability and general operational performance. However, the current study focused on the local airlines, most of which are upcoming companies, meaning the result of the empirical literature will not hold. The study, was also conducted in a different geographical location and on listed entities, whereas the current study is on local airlines. Its, therefore, evident that the current study results play an important role in bridging the gap.

Salim (2012), investigated on the relationship that is exhibited between the bank size and its financial performance among the commercial banks in Kenya. The study's main aim was to determine if there is a relationship among various bank factors, like, total assets, total loans and its financial performance. From the results, it was evident that there is a strong correlation among the factors that affect the banking operations to its financial performance. However, in Salim, (2012) the bank size was an independent variable while the current study, the firm size is a moderating variable. From the current study, the firm size has a significant effect on the relationship between the financial structure and its financial performance.

2.4 Conceptual Framework

The conceptual framework portrays the visualization of the study concerning the connections between the variables under study. The study has independent variables which includes short-term debt, long-term debt, retained earnings, and equity capital. Financial performance is the dependent variable. The independent variables were operationalized by total short-term debt/ total debt, total long-term debt/ total debt/ retained earnings/ total equity and share capital/ total equity while return on assets were the sub-construct for the dependent variable.

INDEPENDENT VARIABLES

DEPENDENT VARIABLE

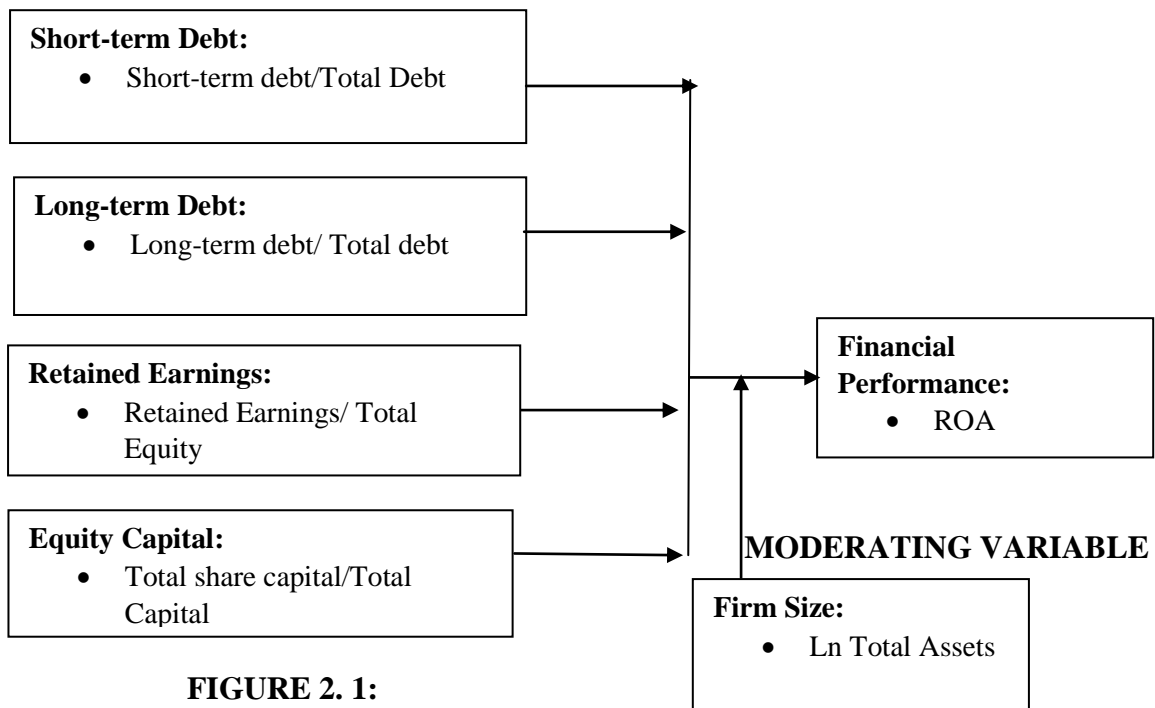


FIGURE 2. 1:
Conceptual Framework

2.5 Operationalization of Variables

TABLE 2. 1:
Definition and measurement of Variables

Variable description	Measurement
Short-term debt	Short term debt/Total Debt
Long-term debt	Long Term Debt/ Total Debt
Retained Earnings	Retained Earnings/Total Equity
Equity Capital	Total share Capital/Total Capital
Firm Size	Natural log of total assets (lnSIZ)
Financial performance	ROA

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The methodology section presents step-by-step process the study used to answer the research problem. This chapter focuses on the, study's research design, the target population, the sampling frame, sample, and technique to be used, the research instrument to be used for data collection, the data collection process, the research instrument's, data processing, analysis, and preparation.

3.2 Research Design

The approach for linking conceptual study issues to the relevant and practicable empirical research is known as the research design (Maiyo, 2013). This research study was quantitative research. The study focused on detailed, convergent reasoning, as opposed to divergent reasoning about the research study (Nassar, 2016). By utilizing precise sampling techniques and massive data sets, quantitative research sought to generalize the findings of the study to broad populations. Quantitative research helped the researcher to examine situations or events that have an impact on the financial performance of local airlines operating in Kenya. Quantitative research also helped the study to generate unbiased data that could be explained in detail using statistics and figures. The research employed secondary data since secondary data would be more accurate and the results of the study would be dependable (Anshu, 2020). The study employed the correlational research design. This research design assisted the researcher in formulating hypotheses and making predictions about the phenomenon under study (Yegon, 2014).

3.3 Target Population

The local airlines with whom the study conducted research and drew conclusions comprised the target population. The accessible population is the whole population which the study had

reasonable access (Amaech, *et al.*, 2022). The study targeted all the twelve local airlines of the population (Appendix II). The list of the local airlines was extracted from the Kenya Civil Aviation Authority (KCAA) website.

3.4 Sampling and Sampling Procedure

The term "sample" denotes a specific segment or subset of the population that holds significance for the researcher. The sampling process is commonly understood as the method used to pick a subset of individuals from a larger population in order to gather data and draw conclusions about the entire population based on the characteristics of the sample (Giedre & Sliogeriene, 2020).

The purpose of the sampling procedure is to choose a subset of the population that possesses qualities that accurately reflect the attributes present in the overall population. A sample can be deemed representative when the outcomes derived from the sample closely align with those that would be obtained from the entire population (Nallaperumal, 2014). This study employed a census approach rather than utilizing sampling methods. The census approach entails the comprehensive assessment of all units within the target population for the purpose of analysis (Gathii *et al.*, 2019). The census is commonly employed as a preferred methodology in cases where the target population is of limited size. The census approach is commonly suggested for target populations with a size of fewer than 100 individuals. The census has been associated with a range of benefits, including as enhancing confidence levels, improving the validity of collected data, mitigating sampling flaws, and facilitating a comprehensive analysis of a given issue. All the twelve local airlines that are operating in Kenya were studied.

3.5 Research Instruments

A research instrument is defined as the instrument utilized to collect data from the target population in order to address the research objectives of the study. The selection of the data

collection instrument is contingent upon the nature of the data that is to be gathered. This study gathered secondary data that had been previously published about several aspects of financial structure and financial performance. The data was collected from secondary sources, specifically the financial reports of the local airlines collected from their websites or from their offices, and afterwards documented in a data collecting sheet.

3.6 Data Collection Procedure

The data collection methods encompass the methodologies and practices employed in the acquisition of data for further analysis. Initially, the researcher acquired a formal document granting permission to conduct the study from the School of Graduate Studies at KCA University. The study used a standardized data collecting tool to get the necessary information from the respondents (Maiyo, 2013). To gather information, the researcher obtained data from the websites of the local airlines and where the data was not available, the researcher visited the airline offices and requested for the specific information. After data collection the researcher carried out data processing, statistical analysis, and data presentation.

3.7 Data Processing, Statistical Analysis, and presentation

Data preparation, according to Yegon (2014), is the process of organizing obtained raw data in an orderly manner to extract relevant information. Editing, coding, categorization, and tabulation are all components of data preparation (Kasomba, 2023). The obtained data was studied and closely examined in this study to determine its structure, significance, and coherence. Additionally, the gathered data was adjusted to remove any ambiguity and glaring mistakes. Based on the research design and the problem posed, the study arranged and categorized the data that was obtained.

To analyse descriptive statistics, frequencies, and percentages were conducted with the aid of the computer software STATA. The study was able to produce a variety of tabulated reports

to be used to analyse the problem under study. The study employed the hierarchical multiple linear regression model to mathematically deduce the relationship between the independent variable and dependent variable, and the moderating effect. The multiple linear regression model for this study was as follows:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \varepsilon \dots\dots\dots \text{Equation 3.1}$$

Where:

Y	Represents	Financial Performance
β_0	Represents	Constant
$\beta_1, \beta_2, \beta_3,$ and β_4	Represents	Regression Coefficients
X_1	Represents	Short-term debt.
X_2	Represents	Long-term debt.
X_3	Represents	Retained earnings.
X_4	Represents	Equity capital.
ε	Represents	Error Margin
i	Represents	Local Airlines
t	Represents	Time

To test the moderating effect caused by the firm size on the relationship that exists between financing structure and financial performance of the local airlines, the following model was used;

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 Z_{it} + \beta_6 X_{1it} \cdot Z_{it} + \beta_7 X_{2it} \cdot Z_{it} + \beta_8 X_{3it} \cdot Z_{it} + \beta_9 X_{4it} \cdot Z_{it} + \varepsilon \dots\dots\dots \text{Equation 3.2}$$

Where Z is the moderator (firm Size).

3.8 Diagnostic Tests

Diagnostic tests are performed to ascertain whether the notions of multiple linear regression model are met. A highly marked violation of this assumption would make the results to be inaccurate. The multiple linear regression model assumes that the study variables are linearly related, normally distributed, no multicollinearity, no auto-correlated and no homoscedasticity. The study adopted normality test, linearity test, heteroscedasticity test and multicollinearity test.

3.8.1 Normality Test

The application of multiple regression analysis necessitates the assumption of normality in the distribution of data. Hence, statistical measures such as normality, skewness, and kurtosis were employed to assess the validity of this claim. Skewness refers to the degree of departure of a value distribution from perfect symmetry around the mean. In order to assess the normalcy of the data, symmetry was examined using a statistical test (Dudovskiy, 2019). In the case where the value is zero, the distribution exhibits symmetry. Conversely, when the value is positive, there is an overrepresentation of smaller values, while a negative value indicates an overrepresentation of larger values. A kurtosis value close to zero suggests that the distribution of the data closely resembles a normal distribution. A negative number denotes a distribution that is less peaked than the normal distribution, while a positive kurtosis implies a distribution that is more peaked than the normal distribution. A $+/-1.96$ statistics on Kurtosis and skewness are sufficient for statistical analysis. For the present test, skewness statistic and a p-value were to be generated and a low p-value indicated significant skewness, suggesting that the data is not normally distributed (Brooks, 2008).

3.8.2 Multicollinearity

Multicollinearity is a phenomenon observed in statistical analysis wherein multiple independent variables within a regression model exhibit a high degree of correlation with each other (Park, 2018). The potential consequences of this could lead to challenges regarding the dependability and efficacy of the model. The multicollinearity test in this study was based on the utilization of the Variance Inflation Factor (VIF). When the Variance Inflation Factor (VIF) surpasses a threshold of 10, it signifies a substantial presence of multicollinearity. This is due to the fact that a high VIF value implies a noteworthy linear association between the predictors and the norm (Alin, 2010). In general, multicollinearity is deemed acceptable when the Variance Inflation Factor (VIF) falls below a threshold of 5. In the event of the presence of multicollinearity, certain measures would be undertaken to mitigate its effects (Senaviratna & Cooray, 2019). One such approach could involve excluding an independent variable (or variables) that exhibit a high degree of correlation from the study. An alternative method was amalgamating the correlated variables into a singular variable. Ultimately, it is feasible to employ a dimensionality reduction methodology, such as principal component analysis, to decrease the quantity of independent variables while preserving a significant portion of the data.

3.8.3 Autocorrelation

Autocorrelation refers to a statistical phenomenon wherein the values of a variable exhibit correlation with their own previous values. The aforementioned issue may give rise to challenges pertaining to the precision and comprehension of the model (Uyanto, 2020). The Wooldridge F-test was employed to examine the alternative hypothesis of the presence of serial correlation, aiming to detect the underlying problem. According to Wooldridge (2002),

if the p-value is lower than the 5% significance level, it suggests the existence of autocorrelation.

3.8.4 Heteroscedasticity

The regression model is predicated on the assumption that the error term exhibits homoscedasticity, which implies that its variance remains constant across time. If this assumption is not met, it suggests the presence of heteroscedasticity in the data. The failure to identify and mitigate heteroscedasticity prior to doing a regression analysis may result in biased standard errors, which can subsequently lead to inconclusive hypothesis testing, as discussed by Gujarati in 2003. The Breusch-Pagan test was employed to ascertain the presence of heteroscedasticity. The null hypothesis proposed in the test was that the error terms exhibit homoscedasticity, meaning they possess a constant variance. In cases where the presence of heteroscedasticity was detected, the study employed the Feasible Generalized Least Squares (FGLS) model as a means to address this issue. According to Wooldridge (2002), the FGLS methodology is deemed to be more advantageous compared to the GLS method. Therefore, it can be argued that the Generalized Least Squares (GLS) estimator is not feasible or attainable in practice. The utilization of FGLS demonstrates its superiority in terms of enhancing the accuracy and consistency of the estimators, so making them well-suited for conducting trustworthy tests of statistical significance.

3.8.5 Hausman Test

The Hausman test was employed to help at determining the appropriate choice between fixed and the random effects. The Hausman test is a method of statistical analysis that is utilized in order to identify whether the study can utilize the Fixed Effect model or the Random Effect model. Field (2008) outlines three distinct approaches to panel data analysis. The first

approach is known as pooled panels, which assumes that there are no individual-specific characteristics within the dataset and no universal effects over time. The second approach is fixed effects models, which assume the existence of unique individual attributes that are not influenced by random variation and do not change over time. The third approach is random effects models, which assume the presence of individual-specific attributes that remain constant over time due to random variation and do not correlate with the explanatory variables of individuals. This model is sufficient for making conclusions about the entire population, rather than solely relying on the studied sample.

A model with fixed effects or a model with random effects must be selected when performing an analysis of panel data (Breusch & Pagan, 1980). The fixed effect model accounts for intercepts that are specific to each company and captures the influence of variables that are both time-consistent and firm-specific. Hausman's (1978) specification test will be utilized to determine whether or not the fixed effect is to be applied. For this test.

If Result:

H_0 : Select RE ($p > 0.05$)

H_1 : Select FE ($p < 0.05$)

CHAPTER FOUR: RESULTS AND DISCUSSION

4.1 Introduction

This chapter discusses the research findings and how the methods from chapter three were used to align them with the objectives of the study. The first section of the chapter covers descriptive statistics, which is followed by diagnostic tests that are performed to confirm that the method employed is adequate. Lastly, remarks are given in reference to earlier empirical and theoretical literature, along with the interpretations of the inferential statistics.

This study's main objective was to look into how local airlines in Kenya's financial performance was affected by their financial structures. The specific objectives were to ascertain the impact of short-term debt, the impact of long-term debt, the impact of retained earnings, the impact of equity capital, and the moderating role of firm size in the relationship between financial structure and financial performance of local airlines in Kenya. The study focused on 12 local airlines operating in Kenya from the period of January 2016 to December 2022. Data was obtained for all the 12 local airlines. Therefore, a balanced panel data using 72 observations was utilized. The analysis of the data is presented in the subsections below starting from the descriptive statistics.

4.2 Descriptive Results of study variables

Descriptive analysis is a statistical method used to summarize, organize, and present data in a meaningful way. It involves calculating various summary statistics and visualizing data to gain insights into its characteristics, patterns, and distributions. The primary objective of descriptive analysis is to provide a comprehensive depiction of the fundamental characteristics of a dataset, including measures of central tendency, variability, and the distribution's shape. The statistical software STATA (Version 16) was utilized to calculate the mean, median, maximum, and minimum values of the study variables in the current dataset. Additional statistical measures that were acquired include the standard deviation,

skewness, and kurtosis. The mean is a statistical measure that represents the central tendency of a dataset. The mean serves as a statistical measure that offers an approximation of the "typical" or central value within a given dataset. The calculation is influenced by the entirety of the values present in the dataset, encompassing both high and low values. The median, in contrast, is a statistical measure that indicates the central value within a dataset when the values are organized in either ascending or descending order. In alternative terms, it is the numerical measure that distinguishes the upper quartile from the lower quartile within the dataset.

The standard deviation is a statistical measure that quantifies the dispersion or variability of a dataset. The concept of variability is utilized to measure the extent of dispersion or range within a given dataset. But simply, it quantifies the extent to which each individual data point differs from the average value of the entire collection. Skewness and kurtosis are statistical variables used to assess the dispersion of a dataset, with skewness indicating the extent to which the distribution deviates from symmetry. Skewness is a statistical measure that assesses the asymmetry of a distribution. A positive skewness is observed when the tail of the distribution extends more towards the right side, indicating a concentration of data points on the left side of the distribution and a few larger values on the right side. In contrast, negative skewness is observed when the distribution exhibits a longer tail towards the left side.

In this particular instance, a significant proportion of the data points exhibit a concentration towards the right side of the distribution, whereas a lower number of values are observed towards the left side. The results are shown in Table 4.1 below.

TABLE 4. 1:**Descriptive Statistics of Study Variables**

STD	overall	.4459524	.2232947	.15	1.08	N =	84
	between		.1132417	.3014286	.6457143	n =	12
	within		.1948432	.0302381	1.157381	T =	7
LTD	overall	.1166539	.2693881	-.888016	.91	N =	84
	between		.1987244	-.1939076	.5528571	n =	12
	within		.1895609	-.5774545	.6513948	T =	7
RE	overall	.3245952	.1892373	.1	.91	N =	84
	between		.1089897	.2054286	.5657143	n =	12
	within		.1574507	-.141119	.8503095	T =	7
SC	overall	.3245928	.2096711	-.1386099	.6989052	N =	84
	between		.1703419	.1066914	.6148621	n =	12
	within		.1305495	-.0555957	.7275001	T =	7
FP	overall	.0117416	.0823964	-.48	.132987	N =	84
	between		.0484322	-.0952253	.0691429	n =	12
	within		.0679195	-.3730331	.2399539	T =	7
lnSIZ	overall	2.432195	1.494797	.3547305	9.031102	N =	84
	between		.6763341	1.318915	3.622699	n =	12
	within		1.345384	-.4098859	7.840598	T =	7

Table 4.1 above shows that the reported mean for short term debt was 0.445 with the higher of 1.08 and the lowest of 0.15. Short term debt was operationalized by the ratio between short term debt and total debt. Results in the table indicate that the value of short term debt for the average DTMFB makes about 44.5 percent of total liabilities. This implies that almost half of the total liabilities for the DTMFB is composed of short term liabilities. According to Mwangi (2017), it is crucial for firms to maintain a specific level of liquidity. Small commercial airlines often need short-term debt due to the dynamic nature of their operations and the specific financial challenges they face. Short-term debt provides these airlines with the necessary financial flexibility to address various key aspects of their business. Firstly, small airlines may require short-term debt to manage working capital and cover day-to-day operational expenses. Airline operations involve continuous expenses such as fuel costs, maintenance, payroll, and lease payments, which need to be met promptly. Short-term debt

can be a convenient source of funding to bridge temporary cash flow gaps. Secondly, airlines often experience fluctuations in demand based on seasons, holidays, or unexpected events. Short-term debt allows them to quickly respond to these variations by injecting capital into their operations when needed. This flexibility is especially valuable for small airlines that may lack the reserves or financial resources of larger carriers. Moreover, small airlines may use short-term debt to seize growth opportunities. This could include leasing or purchasing additional aircraft, expanding routes, or investing in marketing initiatives. Short-term debt provides the means to act swiftly and capitalize on such prospects, which can be critical for their competitiveness and expansion (Okeyo, 2022).

Results in Table 4.1 also show that the mean long term debt value is 0.117 with a minimum of negative 0.888 and a maximum of 0.91. In the current study, long term debt was operationalized by the ratio between the value of long term debt and total debt. As seen in the results, it can be implied that on average the value of long term debt for every 100 shillings of debt is 11.7. The standard deviation of 0.8 indicates that the local airlines have a low variation in terms of their long term debt. The negative long term debt could occur if a company accidentally pays more than the outstanding balance on its long-term debt, it might result in a negative balance in the long-term debt account on the balance sheet. The low level of long term debt could be explained using different justifications. Firstly, long-term debt often carries lower interest rates compared to short-term debt, making it a cost-effective source of funding. By including a portion of long-term debt, the airline can benefit from these lower interest rates, reducing its overall financing costs and potentially improving profitability.

Secondly, long-term debt offers stability and predictability in financial planning. It provides a consistent repayment schedule over a more extended period, allowing the airline to manage

its cash flow more effectively and reduce the risk of sudden financial shocks. Additionally, having a moderate percentage of long-term debt can enhance the airline's financial stability and creditworthiness in the eyes of investors and creditors. It demonstrates a commitment to a structured and sustainable financing approach, which can attract favorable terms and conditions for future debt issuances or financial agreements. Furthermore, long-term debt can support long-term investment plans, such as aircraft acquisitions, infrastructure development, or fleet expansion. It provides the necessary capital to undertake these significant projects, ensuring the airline's growth and competitiveness in the industry. In summary, allocating 11 percent of long-term debt in the financing structure of a small commercial airline is a strategic choice that combines cost-efficiency, financial stability, creditworthiness, and support for long-term growth objectives. This balanced approach can contribute to the airline's overall financial health and sustainability.

Table 4.1 also reports that average value for retained earnings as 0.325 with the minimum being 0.1 and the maximum being 0.91. Retained earnings represent the portion of a company's profits that are not distributed as dividends but retained within the company for various purposes. Retained earnings was operationalized as the ratio between retained earnings and total equity. The results show that for the average DTMFb, retained earnings constitute about 32.5 percent of total capital, with the minimum having 10 percent and the maximum having 91 percent retained earnings. The standard deviation of 0.14 implies that most values of the reported retained earnings have variability to the right of the mean. Retained earnings signify the airline's ability to generate profits over time. By maintaining a substantial portion of earnings within the company, it demonstrates financial health and a track record of profitability. This can boost investor and creditor confidence, potentially leading to more favorable terms when seeking external financing. Retained earnings offer financial stability. They serve as a buffer during economic downturns or unforeseen

challenges, providing a source of capital that can be used to cover operational expenses or investments without resorting to additional debt. This financial cushion can help the airline during tough times and avoid excessive interest payments. Moreover, according to Khamasi (2020), having a significant percentage of retained earnings supports organic growth and expansion. It allows the airline to fund projects, such as fleet modernization, route expansion, or infrastructure improvements, without incurring new debt or diluting ownership. This approach empowers the airline to invest in its own success and build a stronger market position. Retained earnings also signal prudent financial management. It demonstrates a commitment to reinvesting in the business for future growth rather than distributing all profits to shareholders. This responsible financial approach can enhance the airline's long-term sustainability and potential for higher returns.

The reported mean value for share capital, which was measured as the ratio between total share capital and total capital, was 0.325 with a maximum of 0.6998 and a minimum of negative 0.139. Share capital, also known as equity capital or stockholders' equity, typically represents the ownership interest of shareholders in a firm and the mean value reported implies that for every 100 shillings of total capital, 33.4 shillings is share capital. The reported standard deviation of 0.195 indicates that the values of share capital fairly vary around the reported mean. By maintaining a substantial portion of their financing through share capital, the airline can effectively distribute ownership among shareholders. This not only spreads financial responsibility, but can also attract investors who want a stake in the airline's success. This can also be a source of raising capital through the sale of additional shares. Share capital offers a stable source of equity funding. Unlike debt, equity doesn't require periodic interest payments or principal repayment. This can provide the airline with a more stable and predictable cash flow structure, reducing financial risk, particularly during times of economic uncertainty. Having a significant percentage of share capital in the

financing structure can enhance the airline's equity base and, in turn, its financial strength. A strong equity base can be reassuring to investors, creditors, and regulatory bodies, demonstrating that the airline has a robust financial foundation. Furthermore, share capital can serve as a long-term funding source for the airline's expansion and strategic initiatives. When the airline needs additional funds for growth, it can issue new shares or sell them to investors, generating capital for investments in aircraft, routes, or other projects that drive growth and competitiveness.

Table 4.1 above also shows that the reported mean for financial performance of the local airlines was 0.0117 with the highest of 0.133 and the lowest of negative 0.48. Financial performance was operationalized by the ratio between net profit and total assets. Results in the table indicate that the value of financial performance for the average local airline is about 1.17 percent of total assets. The standard deviation of 0.082 shows that the variation of financial performance between the airlines is not large. This observation suggests that the local airlines are experiencing a suboptimal return on their assets. One potential rationale for this phenomenon could be attributed to Local airlines in Kenya might experience remarkably low returns on their assets due to a range of factors. First and foremost, the Kenyan airline industry is intensely competitive, and this stiff competition can lead to reduced profit margins as airlines vie for passengers and pricing pressures mount. Moreover, the aviation sector is highly sensitive to the price of fuel, and any significant increases in oil prices can significantly eat into the profits of airlines, affecting their returns. Infrastructure challenges at Kenyan airports, such as outdated facilities and limited capacity, can lead to operational inefficiencies, potentially causing delays and hindering an airline's ability to fully optimize its assets.

Additionally, economic fluctuations and political instability in Kenya can also have a substantial impact on the industry. Economic downturns and political unrest can lead to

reduced passenger demand, resulting in lower revenues and, consequently, lower returns on assets. Furthermore, the operational costs of running an airline can be notably high, covering areas like maintenance, labor, and administration. Inefficiencies in managing these costs can lead to lower returns. The aviation industry is also subject to various regulations and compliance requirements, which can increase operating costs as airlines invest in technology and training to meet these standards.

4.4 Diagnostics Tests

Before a regression model was put into practice, diagnostic testing was done. Numerous statistical studies, including the autocorrelation test, multicollinearity test, heteroscedasticity test, normality test, and Hausman specification test, were conducted as part of this study.

These tests are part of the study's efforts to reduce the likelihood of misleading regression results.

4.2.1 Normality Test

The application of multiple regression analysis necessitates the assumption that the data follows a normal distribution. Many statistical tests and techniques are based on the assumption that the data follows a normal distribution. These include parametric tests like t-tests, analysis of variance (ANOVA), and linear regression. Testing for normality helps ensure the validity of these tests. Moreover, detecting departures from normality can help identify outliers or extreme values in the data. These outliers can have a substantial impact on statistical analyses, and addressing them appropriately can improve the validity of results. Consequently, statistical measures such as normality, skewness, and kurtosis were employed to assess the validity of this assumption. According to Brooks (2008), the assumption of normality was necessary to perform individual or simultaneous hypothesis testing for the

parameters of the model. Table 4.2 represents findings on the normality results using for skewness and Kurtosis test.

TABLE 4. 2:
Normality Test

Skewness/Kurtosis tests for Normality

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj. chi2(2)	Prob>chi2
STD	84	0.1421	0.3561	2.910	0.0941
LTD	84	0.2896	0.1905	5.711	0.1887
RE	84	0.4623	0.3209	1.355	0.3870
SC	84	0.4510	0.0913	1.910	0.3161
lnSIZ	84	0.3663	0.2219	1.815	0.2860

The results in Table 4.2 shows that the p-values for all the variables were higher than the critical 0.05. It was concluded that the data was normally distributed.

4.2.2 Multicollinearity

The Variance Inflation Factor (VIF) was used in this study's multicollinearity test. A high Variance Inflation Factor (VIF) value indicates a strong linear relationship between the predictors and the norm, while VIF values above 10 indicate the presence of multicollinearity (Alin, 2010). Generally speaking, when the Variance Inflation Factor (VIF) is less than 5, multicollinearity is accepted. According to Field (2009), multicollinearity is indicated by Variance Inflation Factor (VIF) values more than 10. Table 4.3 displays the findings of the multicollinearity analysis.

TABLE 4. 3
Multicollinearity Test Results

Variable	VIF
STD	1.69
LTD	1.46
RE	2.18
SC	3.44
lnSIZ	2.114

The lack of multicollinearity, as demonstrated by the variance inflation factor (VIF) values of all variables in Table 4.3 being below 10, suggests that there is no noteworthy correlation or substantial interconnection among the independent variables in the regression analysis.

4.2.3 Heteroscedasticity Test

A heteroscedasticity test was conducted in order to determine whether the variance of the error terms remains constant across all observations. Heteroscedasticity occurs in situations where homoscedasticity is absent. Heteroscedasticity can affect the validity of statistical inferences, particularly in the context of linear regression. When the assumption of constant variance is violated, standard errors, confidence intervals, and hypothesis tests may no longer be accurate. This means that the p-values and significance of coefficients can be unreliable, potentially leading to incorrect conclusions about the relationships between variables. In the presence of heteroscedasticity, ordinary least squares (OLS) estimators can become inefficient. This means that they may no longer be the best estimators in terms of precision and accuracy, and alternative methods like weighted least squares may be more appropriate. The Breusch-Pagan test was employed to assess the presence of Homoscedasticity. The null

hypothesis proposed in the test was that the error terms exhibit homoscedasticity, meaning they possess a constant variance. The results are presented in Table 4.4.

TABLE 4. 4:
Homoscedasticity Test

Breusch-Pagan / Cook-Weisberg test for Homoscedasticity
Ho: Constant variance
Variables: fitted values of FP
chi2(1) = 0.891
Prob > chi2 = 0.3168

The data under investigation showed homoscedasticity, as shown by the results in Table 4.4. According to the first hypothesis (Ho), there is a constant variance in the data. There was insufficient evidence to reject the null hypothesis because the p-value (0.3168) was higher than the significance level of 0.05. It suggests that the assertion that the variability of the residuals varies substantially amongst levels of the independent variables is not well-supported by the available data. As a result, the data satisfied the homoscedasticity criterion, which is essential for guaranteeing the reliability of statistical judgments and the validity of regression analysis results.

4.2.4 Autocorrelation

It is a presumption of multiple linear regression models that the model's errors are uncorrelated and independent of one another; nevertheless, in time-series research, when this assumption is not met, the errors are perceived as dependent or auto-correlated. The purpose of this study was to determine whether or not the residual is serially correlated over time by using the Wooldridge test to test for autocorrelation in the data.

The results are presented in Table 4.5.

TABLE 4. 5:
Autocorrelation

Wooldridge test for autocorrelation in panel data
H ₀ : no first-order autocorrelation
F(21, 40) = 1.18
Prob >F = 0.4712

The F-test with 21 and 40 degrees of freedom and a reported value of 1.18 is the test statistic. The F-test's p-value of 0.4712 suggests that it is not statistically significant at the 5% level. The study concludes that residuals are not autocorrelated as a result, supporting the null hypothesis that there is no autocorrelation.

4.2.5 Hausman Test

Field (2008) states that selecting between a fixed effects model and a random effects model is imperative when performing panel data analysis. The estimation coefficients of both random and fixed effects must be taken into account in order to choose the best model. In order to select the best model for the investigation fixed effects or random effects the study used Hausman's specification test (1978). Table 4.6 presents the results obtained from the Hausman test.

A model with fixed effects or a model with random effects must be selected when performing an analysis of panel data (Breusch & Pagan, 1980). The fixed effect model accounts for intercepts that are specific to each company and captures the influence of variables that are

both time-consistent and firm-specific. Hausman's (1978) specification test will be utilized to determine whether or not the fixed effect is to be used. For this test.

If Result:

H₀: Select RE (p > 0.05)

H₁: Select FE (p < 0.05)

TABLE 4. 6:
Hausman Test

Variable	(b)	(B)	(b-B)
	Fixed	Random	Difference
STD	-.0042316	-.0190446	.014813
LTD	.7987163	1.076998	-.2782821
RE	-.6185252	-.9092983	0290773
SC	-.4322603	-.400983	.03128
lnSIZ	1.67951	1.179176	.5003337
chi2(4)	5.37		
Prob>chi2	0.0731		

The random effect model was preferred over the fixed effects model, as indicated by the results in Table 4.6, where the p-value was 0.0731, which was greater than 0.05.

4.3 Inferential Results

4.3.1 Correlation Analysis

To look into the relationship between the dependent and independent variables, Pearson's correlation analysis was initially employed. This link's strength and direction were evaluated using the correlation coefficient, which runs from -1 to +1 on a scale of -1 to +1. The variables have a negative regression coefficient and are moving in the opposite direction

when there is a significant negative correlation coefficient. A significant positive correlation coefficient, on the other hand, indicates that the variables move in lockstep and have a positive regression coefficient. When the correlation coefficient is zero, there is no link between the variables.

When the correlation coefficients are highly significant and virtually perfect (approaching +1), this indicates the presence of multicollinearity, in which the variables provide duplicate information. In such cases, it is recommended that one of the variables be excluded to reduce multicollinearity. A correlation coefficient of less than 0.8 suggests a less severe multicollinearity issue, which is frequently disregarded. However, abnormally high correlation values suggest a large degree of multicollinearity among the independent variables, prompting corrective steps (Gujarati, 2007). Table 4.7 displays the specific correlation results.

Table 4.7: Correlation between Study Variables

TABLE 4. 7:

Correlation between Study Variables

	STD	LTD	RE	SC	lnSIZ	FP
STD	1.0000					
LTD	0.2482 0.0228	1.0000				
RE	0.3240 0.0026	0.5098 0.0000	1.0000			
SC	0.0684 0.5366	-0.4428 0.0000	-0.0977 0.3766	1.0000		
lnSIZ	0.1087 0.3252	-0.1117 0.3116	0.0093 0.9331	0.2886 0.0078	1.0000	
FP	0.0762 0.4906	-0.3766 0.0004	-0.1620 0.1410	0.3418 0.0015	0.2294 0.0358	1.0000

Short-term debt and financial performance have an insignificant ($p = 0.4906$) correlation, as Table 4.7 above demonstrates. This suggests that the local airlines' financial performance changes significantly by 0.0762 for every unit increase in short-term debt. Because local airlines maintain strong liquidity positions and practice prudent financial management, there is no correlation found between their short-term debt and financial performance. These airlines may have effective strategies for using short-term debt to cover immediate expenses without burdening their financial health. They might also have diverse revenue streams or alternative funding sources, reducing their reliance on debt. Moreover, selective and judicious use of short-term debt, along with efficient cost controls, could help maintain profitability despite borrowing. Effective risk management and favourable economic conditions could further contribute to this lack of correlation. In essence, the airlines' sound financial practices and robust operational efficiency may be shielding them from any adverse impact that short-term debt could have on their financial performance (Divekar, 2021).

Additionally, Table 4.7 demonstrates that there is a significant -0.3766 ($p = 0.004$) correlation between long-term debt and financial performance. This suggests that the financial performance of the local airlines declines by 0.3766 for every unit increase in long-term debt. There are a number of important reasons for the strong and positive relationship observed between long-term debt and the financial performance of Kenyan regional airlines. Airlines often use long-term debt to facilitate important investments, such as acquiring new aircraft or expanding their routes, which can lead to increased revenue and enhanced financial performance over time. Additionally, long-term debt usually comes with lower interest rates compared to short-term debt, which helps airlines reduce interest expenses, leaving more funds available for operational enhancements and profitability (slam *et al.*, 2019). Long-term debt offers stability and predictability in financing, enabling airlines to make long-term plans, informed financial decisions, and better management of their operations, all of which can

positively influence financial performance. Moreover, it allows airlines to invest in the growth of their fleets and infrastructure, expanding passenger capacity and revenue generation, thus contributing to improved financial performance.

Lidivolo (2023) claims that because long-term debt has longer maturities than short-term debt, airlines are able to strategically allocate funds and avoid cash flow issues that could negatively impact their financial performance. The acquisition of long-term funding is frequently a sign of investor confidence in the airline's ability to grow and maintain its finances, which can result in better loan terms and more funding. Furthermore, the growth facilitated by long-term debt may result in economies of scale, cost reductions, and overall financial performance improvement. Airlines that effectively use long-term debt generally do so as part of a well-thought-out financial strategy, optimizing their capital structure and ensuring that long-term obligations align with their objectives. In summary, the positive and significant correlation between long-term debt and the financial performance of local airlines in Kenya reflects the strategic use of long-term financing to fund growth, reduce interest costs, and enhance financial stability, allowing airlines to invest in expansion and improvements that ultimately lead to improved financial results.

The output in Table 4.7 also indicates that the correlation between financial performance and retained earnings is negative and insignificant ($R = -0.1620$, $p = 0.1410$) which implies that for every unit increase in retained earnings, there is a 0.1620 decrease in financial performance. There could be several possible explanations for this. Firstly, it's possible that these airlines are not effectively reinvesting their retained earnings in ways that directly contribute to financial performance. Retained earnings represent profits reinvested into the company, and if these funds are not being used to enhance operational efficiency, expand routes, or invest in other revenue-generating activities, their presence might not positively impact financial performance. Additionally, the insignificant correlation may stem from the

fact that retained earnings alone do not capture the complete financial picture of these airlines. Other factors, such as economic conditions, competition, or operational challenges, may be playing a more dominant role in determining financial performance, overshadowing the influence of retained earnings. Furthermore, the nature of the airline industry, which is susceptible to external factors like fuel price fluctuations, political events, and natural disasters, could be contributing to the lack of a significant correlation. These external variables may have a more pronounced effect on financial performance compared to the internal factor of retained earnings.

Lastly, the correlation between share capital and financial performance as shown in Table 4.7 is 0.3418 which is significant ($p = 0.0015$). This implies that for every unit increase share capital, there is an insignificant increase of 0.3418 in financial performance for the local airlines. This result could be explained by several reasons. Firstly, a higher share capital often signifies a stronger equity base. Airlines with a substantial share capital typically have a more stable financial foundation, which can boost investor confidence and signal financial strength. This, in turn, can lead to improved access to external funding on favorable terms, such as loans or bonds that can be channeled into operational improvements or expansion efforts, ultimately enhancing financial performance. Moreover, a greater share capital can enable local airlines to manage financial challenges more effectively. It provides a cushion against economic downturns, unexpected expenses, or volatile market conditions, which might negatively impact financial performance. This financial buffer allows airlines to maintain operations smoothly and potentially weather tough times without resorting to excessive debt.

According to Hassan (2018), the use of share capital often signifies a commitment to sustainable growth. Instead of distributing all profits to shareholders, airlines with significant share capital choose to reinvest a substantial portion of earnings back into the business. This reinvestment can lead to the implementation of long-term growth strategies, including fleet

expansion, route development, and service enhancements, all of which contribute to financial performance. Furthermore, a strong equity base can boost the airline's creditworthiness, leading to more favorable terms and conditions when seeking external financing. Lenders and creditors are often more confident in businesses that have a substantial share capital, as it provides a financial safety net. Lastly, the significance of this correlation may also stem from the fact that share capital represents a long-term commitment by shareholders to the airline's growth and profitability. This confidence in the airline's potential can drive a positive trajectory in terms of financial performance.

4.3.2 Regression Analysis

To determine the statistical significance of the financial structure's impact on the financial performance of Kenya's local airlines, the study used hierarchical panel regression analysis. The random effects model outperformed the fixed effects model according to the Hausman Test. The unmoderated regression, which was intended to address objectives one through four, was the first output. Table 4.8 below displays the findings for the unmoderated random effects regression.

Table 4. 8:**Unmoderated Regression Results**

Random-effects GLS regression	Number of obs	=	84
Group variable: ID	Number of groups	=	12
R-sq:	Obs per group:		
within = 0.2180	min =		7
between = 0.8166	avg =		7.0
overall = 0.4677	max =		7
corr(u_i, X) = 0 (assumed)	Wald chi2(4)	=	48.38
	Prob > chi2	=	0.0000

FP	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
STD	.2222149	.1053774	2.11	0.035	.0156789	.4287508
LTD	-.3903918	.1220601	-3.20	0.001	-.6296251	-.1511585
RE	.4821337	.1272273	3.79	0.000	.2327728	.7314945
SC	-.5775501	.2865717	-2.02	0.044	-1.13922	-.01588
_cons	-.0054418	.0701007	-0.08	0.938	-.1428366	.1319529
sigma_u	.06553418					
sigma_e	.18279424					
rho	.11389296	(fraction of variance due to u_i)				

The findings presented in Table 4.8 above demonstrate that short-term debt significantly affects Kenyan local airlines' financial performance ($\beta = 0.222$, $p = 0.035 < .05$). This suggests that the airlines' financial performance increases significantly by 22.2 percent for each unit increase in short-term debt, holding other variables constant. According to Karuma (2023), when a small firm has its financial performance increasing as a result of short term debt increasing, it implies that small airlines can utilize short-term debt to enhance their operational capabilities. They may use this debt to seize growth opportunities, improve services, or manage day-to-day expenses, potentially leading to better financial results. Moreover, the connection suggests that managing short-term debt is crucial for risk mitigation. Small airlines need to strike a balance between debt utilization and financial stability, as excessive debt can lead to financial challenges, while too little debt may limit growth prospects.

The finding that short-term debt has a significant effect on the financial performance of local airlines in Kenya, with a beta (β) value of 0.222 and a p-value of 0.035 (which is less than the commonly accepted significance level of 0.05), implies that there is a noteworthy relationship between short-term debt and financial performance. In practical terms, this means that when we keep all other factors constant, for every unit increase in short-term debt, the financial performance of these airlines is expected to increase by 22.2 percent. In other words, the study suggests that taking on more short-term debt is associated with an improvement in the financial performance of local airlines in Kenya.

The random effects regression results in Table 4.8 also show that long term debt has a negative significant effect ($\beta = -0.390$, $p = 0.001 < 0.05$) on financial performance of the local airlines in Kenya, which implies that there is a 39 percent significant negative decline in financial performance of the local airlines in Kenya, holding all other factors constant with every unit increase in long term debt. The finding from the random effects regression analysis in Table 4.8 indicates that there is a significant and negative relationship between long-term debt and the financial performance of local airlines in Kenya. Specifically, the beta (β) value of -0.390, combined with a p-value of 0.001 (which is less than the commonly accepted significance level of 0.05), implies that, holding all other factors constant, for every unit increase in long-term debt, there is a notable decrease of 39 percent in the financial performance of these airlines. It suggests that an increase in long-term debt may burden local airlines in Kenya, leading to a decrease in their financial performance. Long-term debt might involve substantial interest payments and repayment obligations that can strain their financial resources. Moreover, negative effect underscores the importance of a balanced financing strategy. Airlines should consider a mix of debt and equity to fund their operations, and they should be aware of the potential risks associated with excessive long-term debt.

Table 4.8 results also demonstrate that retained earnings have a positive significant effect on the financial performance ($\beta = 0.482$, $p = 0.000 < 0.05$) of the local airlines. This suggests that, when all other factors remain constant, a significant positive increase of 48.2 percent occurs in the financial performance of the local airlines when retained earnings are increased by a unit. The benefits of retained earnings highlight how crucial it is to establish and preserve a solid financial foundation. Local airlines in this context appear to benefit significantly from the accumulation of retained earnings, which can serve as a financial cushion during challenging times and provide resources for investment and growth. Moreover, it could imply that retained earnings can contribute to financial stability and resilience, allowing airlines to weather economic fluctuations and uncertainties with greater ease. This finding suggests that the airlines with healthier levels of retained earnings are better positioned to endure adverse circumstances.

Finally, the unmoderated random effects panel data regression results in Table 4.8 demonstrate that, when all other factors are held constant, share capital has a negative significant effect ($\beta = -0.578$, $p = 0.044 < 0.05$) on the financial performance of the local airlines. This suggests that, when all other things are held constant, there is a notable decline in financial performance of 57.8% for each unit increase in share capital. A company's current shareholders' ownership is frequently diluted when it issues more shares in order to raise capital. This means that existing shareholders, including the company's management, hold a smaller percentage of the company. If the new shareholders have different objectives or strategies, conflicts of interest may arise, potentially leading to disagreements about the company's direction and financial decisions. This can hinder effective decision-making and result in a negative impact on financial performance.

Based on the results in Table 4.8, the fitted unmoderated model is as follows;

$$FP = -0.005 + 0.222 \text{ STD}^* - 0.390 \text{ LTD} + 0.482 \text{ RE}^* - 0.577 \text{ SC}$$

This model significantly predicts 46.77 percent of financial performance of the local airlines in Kenya as shown by the R squared overall value of 0.4677.

The fifth objective was to establish the moderating effect of firm size on the relationship between the financial structure and the financial performance of the local airlines. To perform this evaluation, the following model was used:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 Z_{it} + \beta_6 X_{1it} \cdot Z_{it} + \beta_7 X_{2it} \cdot Z_{it} + \beta_8 X_{3it} \cdot Z_{it} + \beta_9 X_{4it} \cdot Z_{it} + \varepsilon$$

Where Z was the moderating variable operationalised by lnSIZ. The moderated random effects regression results for the output is shown in Table 4.9 below.

TABLE 4. 9:

Moderated Random Effects Model

Random-effects GLS regression	Number of obs	=	84
Group variable: ID	Number of groups	=	12
R-sq:	Obs per group:		
within = 0.2977	min =		7
between = 0.7711	avg =		7.0
overall = 0.4855	max =		7
corr(u_i, X) = 0 (assumed)	Wald chi2(9)	=	44.38
	Prob > chi2	=	0.0000

FP	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
STD	.1721498	.2446983	0.70	0.482	-.30745 .6517497
LTD	-.2626609	.2688662	-0.98	0.329	-.7896291 .2643072
RE	.8440642	.2404022	3.51	0.000	.3728845 1.315244
SC	-.3826284	.6807113	-0.56	0.574	-1.716798 .9515412
lnSIZ	.0626975	.0420435	1.49	0.136	-.0197063 .1451012
STDZ	.0130652	.0936639	0.14	0.889	-.1705127 .1966432
LTDZ	-.0413292	.1158869	-0.36	0.721	-.2684634 .185805
REZ	-.1387207	.0746542	-1.86	0.063	-.2850402 .0075988
SCZ	.0011422	.4849509	0.00	0.998	-.9493442 .9516286
_cons	-.1653421	.1177425	-1.40	0.160	-.3961131 .065429

The moderated random effects Table 4.9 above shows that most of the variables were significant when unmoderated apart from retained earnings which become insignificant after moderation. Moreover, the predictive power of the model increases from 46.77 percent (R-Sq = 0.4677) to 48.55 (R-Sq = 0.4855) implying that in the presence of firm size in the model as an interaction term improves the model indicating that firm size is a significant moderator of the relationship. A variable is considered a moderator in a study when it influences the strength or direction of the relationship between the independent variable (X) and the dependent variable (Y).

4.4 Discussion of Results

The objective of the study was to find out how Kenyan local airlines' financial performance was impacted by their financial structure. The study specifically aimed to ascertain the impact of short-term debt, long-term debt, retained earnings, and share capital on the financial performance of local airlines that operate in Kenya.

Random effect regression results for the first objective showed that short term debt has a significant effect on financial performance of local airlines in Kenya ($\beta = 0.222$, $p = 0.035 < .05$). The null hypothesis set as short-term debt has no significant effect on financial performance of local airlines in Kenya was therefore rejected. The results agree with those by Okeyo (2022) who studied the influence of short-term debt financing on the profitability of airlines operating in Kenya. The study used a descriptive research design. The study revealed that long term debt financing, short-term debt financing, retained earnings and the share capital positively influences the financial performance of airlines in Kenya. However, the study's target population was not the same as the current study's target population and this results to a methodology gap that the current study sought to fill. Karuma (2023) investigated the effect of debt financing on financial performance of listed manufacturing firms in Kenya.

It was evident from the study results that the financial performance of listed manufacturing firms in Kenya are positively and significantly affected by debt financing.

The random effects regression results based on objective two show that long term debt has a negative significant effect ($\beta = -0.390$, $p = 0.001 < 0.05$) on financial performance of the local airlines in Kenya holding all other factors constant. The null hypothesis that had been set as long-term debt has no significant effect on financial performance of local airlines in Kenya was therefore rejected. These findings collaborate those by Abbas *et al.*, (2020) who examined the impact of debt financing on airline's transport industry performance in Pakistan. Descriptive research design, was employed by the study. It was evident from the study, that debt financing, has a negative impact on the airline transport industry in Pakistan. However, the study can be criticized on the grounds that the target population was too small to help the research draw representative conclusions about the variables understudy. The study was conducted elsewhere geographically than where the present study was conducted. Consequently, the outcomes of the two research could differ.

Additionally, Lidivolo (2023) investigated the effect of long-term debt financing on the profitability of commercial airlines operating in Kenya. Eight airlines companies operating in Kenya were used as the target population. Census sampling technique was employed, and secondary data used for this study was collected using secondary data collection sheet from the published accounts. It was evident from the study's findings that long-term debt financing has a significant and statistical impact on the profitability of commercial airlines operating in Kenya. The study used a different research design from the research design that the current study employed. Elsewhere, the results differ with those by Musangi (2022) who investigated the influence of investment and financing decision on profitability of airlines in Kenya. Descriptive research design was used by the study. Ten local airline companies operating in Kenya were used as the target population. The results showed that long term debt financing

and finance decisions significantly increase the profitability of Kenyan airlines. However, the study's criticism is that the study's target population of 10 local airlines was different from the target population of 12 local airlines that the current study employed.

Regression results based on objective three show that retained earnings have a positive significant effect on financial performance ($\beta = 0.482, p = 0.000 < .05$) of the local airlines. The null hypothesis set as retained earnings has no significant effect on financial performance of local airlines in Kenya was rejected. The results can be compared with those by Yaghi (2015) conducted a study on comparing the performance of major airline companies by traditional and airline specific ratios and measures in Turkey. The study adopted ratio analysis with an aim of revealing specific behavior of the airline industry on the selected liquidity, profitability and leverage ratios. The study revealed that specific accounting ratios positively and significantly affects the performance of major airline companies in Turkey. However, the methodology that the study employed was different from the methodology that the current study employed. Demessie (2020) aimed to investigate the effect of capital structure on performance of local Airlines in Ethiopian. According to the results of the regression analysis, the ratio of total debt to assets had an insignificant negative effect statistically on the performance of the airlines operating in Ethiopian, while retained earnings, short- and long-term debt to asset ratios had a statistically insignificant positive influence on Ethiopian Airlines' performance. The Khamasi (2020) carried out research on financial structure and performance of commercial airlines in operating Kenya. Explanatory research design was employed by the study. Twelve local commercial airlines operating in Kenya were sampled for the study. After data analysis, the study concluded that retained earnings financing affects the financial performance of commercial airlines Kenya negatively.

Results based on the fourth objective using the unmoderated random effects panel data regression shows that share capital has a negative significant effect ($\beta = -0.578, p = 0.044 < .05$)

on financial performance of the local airlines holding all other factors constant. The null hypothesis was rejected. The results collaborate those by Huang (2021) who conducted a study on assessing the financial performance of airlines operating in the Asian- Pacific Region and who found out that share capital statistically and significantly affected financial performance of Asia- Pacific airlines. Kasomba (2023) investigated the effect of financial structure and financial performance of local commercial airlines operating in Kenya. The study findings were that share capital financing had no visible impact on the financial performance of Kenya's local commercial airlines. The share finance significantly affects the financial performance of local commercial airlines operating in Kenya. Hassan (2018) studied the effects of capital structure on financial performance of airlines in Kenya. The study findings were that share capital structure positively and significantly affects the financial performance of the Kenya Airways.

Results based on the fifth objective shows that while most of the variables which were significant in the unmoderated become insignificant after moderation, the predictive power of the model increased from 46.77 percent ($R\text{-Sq} = 0.4677$) to 48.55 ($R\text{-Sq} = 0.4855$) implying that in the presence of firm size in the model as an interaction term improves the model indicating that firm size is a significant moderator of the relationship. The null hypothesis was therefore rejected.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

A summary of the main findings, conclusions, and suggestions made as a result are given in this chapter. This is carried out in keeping with the study's objectives.

5.2 Summary of Key Findings

The objective of the study was to find out how Kenyan local airlines' financial performance was impacted by their financial structure. The study specifically aimed to ascertain the impact of short-term debt, long-term debt, retained earnings, share capital, and firm size on the relationship between financial structure and financial performance of local airlines in Kenya. Below is a summary of the main conclusions.

5.2.1 Short-term Debt and Financial Performance of Local Airlines

The study's primary objective was to ascertain how short-term debt affected Kenyan local airlines' financial performance. The results of the analysis showed that short-term debt significantly affects Kenyan local airlines' financial performance ($\beta = 0.222$, $p = 0.035 < 0.05$). This suggests that there is a significant increase in financial performance by 22.2 percent for every unit increase in short-term debt, holding other factors constant.

5.2.2 Long-term Debt and Financial Performance of Local Airlines

Evaluating the impact of long-term debt on the financial performance of Kenyan local airlines was the study's second objective. According to the results of the random effects regression analysis, long-term debt has a significant negative impact ($\beta = -0.390$, $p = 0.001 < 0.05$) on the financial performance of Kenya's local airlines. This means that, when all

other factors are held constant, there is a significant 39.0 percent decrease in financial performance for every unit increase in long-term debt.

5.2.3 Retained Earnings and Financial Performance of Local Airlines

Evaluating the impact of retained earnings on the financial performance of Kenyan regional airlines was the third research objective. According to the analysis, retained earnings have a significant positive impact on the financial performance of local airlines ($\beta = 0.482$, $p = 0.000 < .05$). This means that, when all other factors remain unchanged, a significant positive increase of 48.2 percent occurs in the financial performance of local airlines when retained earnings are increased by one unit.

5.2.4 Share Capital and Financial Performance of Local airlines

Evaluating the impact of share capital on the financial performance of Kenyan regional airlines was the study's fourth objective. When all other variables are held constant, the unmoderated random effects panel data regression results demonstrate that share capital has a negative significant effect ($\beta = -0.578$, $p = 0.044 < .05$) on the financial performance of the local airlines.

5.2.5 Moderating Effect of Firm Size on the Relationship between Financial Structure and Financial Performance of Local airlines

The fifth objective of the study was to establish the moderating effect of firm size on the relationship between financial structure and financial performance of local airlines in Kenya. While results showed that most of the variables which were significant in the unmoderated apart from retained earnings become insignificant after moderation. Moreover, the predictive power of the model increases from 46.77 percent ($R\text{-Sq} = 0.4677$) to 48.55 ($R\text{-Sq} = 0.4855$)

implying that in the presence of firm size in the model as an interaction term improves the model indicating that firm size is a significant moderator of the relationship.

5.3 Conclusions

Determining the impact of short-term debt on the financial performance of local airlines in Kenya was the study's primary objective. The results of the analysis showed that local airlines in Kenya are significantly impacted financially by short-term debt. In particular, the study shows that, in the Kenyan context, short-term debt has a significant impact on the financial performance of local airlines. The findings show that a number of financial performance metrics, including but not limited to profitability, liquidity, and solvency, are significantly and statistically affected by the use of short-term debt, such as loans or borrowings with a maturity of one year or less.

Evaluating the impact of long-term debt on the financial performance of Kenyan local airlines was the study's second objective. An analysis of random effects regression showed that long-term debt significantly impairs financial performance. The study concludes that there exists a noteworthy inverse relationship between long-term debt and financial performance, indicating that long-term debt is a significant predictor of poor financial performance in the local airline industry.

Evaluating the impact of retained earnings on the financial performance of Kenyan local airlines was the third research objective. Retained earnings significantly improve the financial performance of local airlines, according to the analysis. The study offers empirical support for the idea that retained earnings are essential for improving local airlines' financial performance. Retained earnings have a positive coefficient in the regression analysis, meaning that higher retained earnings are generally linked to better financial performance.

Evaluating the impact of share capital on the financial performance of Kenyan local airlines was the study's fourth objective. After controlling for all other variables, the random effects panel data regression analysis revealed that share capital significantly and negatively affects the financial performance of the local airlines. According to the study, the amount of share capital in local airlines has a significant negative impact on financial performance when considering other factors at the same level and analyzing the data.

5.4 Recommendations

5.4.1 Practical Recommendations

This finding suggests that local airlines in Kenya should carefully consider their short-term debt management strategies as an integral component of their financial operations. Prudent management of short-term debt can contribute positively to financial performance metrics, enhancing profitability, liquidity, and overall financial stability. However, it is essential for local airlines to strike a balance in their debt management practices to mitigate associated risks.

It is also recommended that the local airlines should assess their long-term debt management strategies. While the analysis suggests a negative effect, the significance of the coefficient implies that changes in long-term debt may substantially impact financial performance. Therefore, it's essential for organizations to carefully consider the trade-offs associated with taking on additional long-term debt.

Local airlines should also carefully evaluate their capital management strategies. While share capital appears to have a significant negative effect on financial performance, it remains an essential component of the airlines' capital structure. The local airlines should strike a balance between maintaining adequate capital levels to meet regulatory requirements and optimizing their capital utilization.

5.4.3 Areas for Further Studies

The present study focused on investigating the effect of financial structure on financial performance of local airlines in Kenya. While the results are revealing, it is important to note that there were several limitations. The study focused on local airlines in Kenya using a panel of seven years. It is suggested that future studies incorporate local airlines in the region and use longer panels.

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APPENDICES

APPENDIX I: SECONDARY DATA COLLECTION SHEET

s/n		2022	2021	2020	2019	2018	2017	2016
1	Short Term Debt							
2	Long Term Debt							
3	Total Debt							
4	Retained earnings							
5	Equity Capital							
6	Total Capital							
7	Total Asset							

APPENDIX II: LIST OF LOCAL AIRLINES IN KENYA

1. Fly540
2. Fly-SAX
3. Jambo jet
4. Air Kenya Express
5. East African (Smart Flying)
6. Skyward Express
7. Flex Air Charters Limited
8. Avail Limited
9. Safarilink
10. Bluesky Aviation
11. Jetways Airlines
12. Renegade Air

Source: Kenya Civil Aviation Authority, 2023