

**EFFECTS OF FINANCIAL PROFITABILITY ON PROFITABILITY OF
DOMESTIC COMMERCIAL AIRLINES IN KENYA**

SAMUEL NGINYA NJOROGE

**THIS THESIS HAS BEEN SUBMITTED AS A REQUIREMENT FOR THE
AWARD OF A MASTER'S DEGREE IN FINANCE & INVESTMENT OF
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DECLARATION

This thesis is my original work and no copy of it should be submitted to any other examination body without my consent and/or that of Kenya Methodist University.

Name:	Signature	Date
Samuel Nginya Njoroge

Reg. No: MFI-3-1938-3/2017

Declaration by the supervisors

This thesis has been submitted with our approval as the university supervisors

Name:	Signature	Date
Dr. Vivian Cherono

**Lecturer, Kenya Methodist University,
Nairobi Campus.**

Name:	Signature	Date
Mr. Kimathi Anthony

**Lecturer, Kenya Methodist University,
Nairobi Campus**

ABSTRACT

This study was undertaken with the sole intention and purpose of establishing whether there is a significant relationship between levels of profitability and four main components of the financial structure of domestic commercial airlines in Kenya. The researcher undertook to establish how share capital finance, lease finance, debt finance and retained earnings related with the profit levels of domestic commercial airlines in Kenya, measure the strength and magnitude of the variables' relationships while establishing if the relationships are significant and negative/positive. Three theories founded the basis of literature review in this study, i.e. agency theory, the pecking order financing model and the trade-off theory of capital structure. The study adopted a causal-effect research design. The study targeted eleven commercial domestic airline companies registered by AFRAA's approval that were in operations between 2012 and 2021. Annual average secondary data was collected using a secondary data collection sheet, and the data covered a period from 2012 to 2021. This study used numerical financial data that was retrieved from respective airlines' annual and audited financial statements posted on their respective airlines' websites. The data was obtained from the airlines' audited annual financial statements from respective company's website. Both inferential and descriptive statistics were used. Data were analyzed using STATA version 15 alongside Microsoft Excel. Various diagnostics tests including normality, multi-collinearity, heteroscedasticity, serial correlation, stationarity and Hausman tests were performed prior to running the regression analysis. Analysis of the collected data showed that there was a positive correlation between share capital finance and net profit margin, ($r = 0.4226$; $P < 0.05$), positive correlation between lease finance and profitability ($r = 0.4520$; $P < 0.05$), debt finance and net profit margin were positively correlated ($r = 0.5231$; $P < 0.05$), and lastly, retained earnings and net profit margin were positively correlated ($r = 0.4905$; $P < 0.05$). Data analysis by use of simple linear regression analysis found that there was a significant relationship between share capital finance and profitability ($\beta = 0.3778$; $P < 0.05$), the relationship between lease finance and profitability was significant, ($\beta = 0.4066$; $P < 0.05$), the relationship between debt finance and profitability was significant, ($\beta = 0.3758$; $P < 0.05$), and lastly, the relationship between retained earnings and profitability was also significant, ($\beta = 0.4458$; $P < 0.05$). When study applied multiple linear regression analysis method, results indicated a significant relationship between share capital finance ($\beta = 0.402$; $P < 0.05$), lease finance ($\beta = 0.737$; $P < 0.05$), debt finance ($\beta = 0.904$; $P < 0.05$), and retained earnings ($\beta = 0.244$; $P < 0.05$) with the Net Profit Margin, i.e. profitability of domestic commercial airlines in Kenya. This research concluded that at bivariate level, retained earnings was the most significant variable among the four variables under study. However, at multivariate level, debt finance was the most significant variable among the four variables under study followed by lease finance, share capital finance and lastly retained earnings. This study recommended a greater need for efficient and effective policies which a firm can use and apply to determine and monitor its financial structure. The study further recommended to the domestic commercial airlines in Kenya to have a good and performing financial management team that will make the correct decisions about financing mix and the resultant relevant policies, while matching various sources of funds to the goals and objectives of the firms. Further, in order to reduce the risks and costs associated to debt finance, local airline companies should make more use of shareholders' sources of funds as the preferred option of financing, compared to

borrowing. However, if it becomes mandatory for the firms to borrow, commercial airlines must first borrow in short term rather than long term.

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LIST OF ACRONYMS AND ABBREVIATION

AFRAA	African Airlines Association
CLRM	Classical Linear Regression Model
FTK	Freight per Kilometer
GDP	Gross domestic Product
GOK	Government of Kenya
IATA	International Air Transportation Association
ICAO	inflation and general economic conditions
KNBS	Kenya National bureau of Statistics
LCCs	low-cost carriers
NACOSTI	National Commission for Science Technology and Innovation
ROA	Return on Asset
RPK	Revenue per Kilometer
SEOs	Seasoned Equity Offerings
VIF	variance inflation factor
SCF	Share Capital Finance
RE	Retained Earnings
LF	Lease Finance
DF	Debt Finance

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CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The commercial airline sector provides an estimate of \$2.8T towards worldwide Gross Domestic Product, or 3.7 percent of the total global GDP (Agustini et al., 2021). Nevertheless, factors such as political turmoil &, international trade conflicts between nationals, lack of adequate investment funds, global increase in fuel prices, rise in inflation rates, insufficient government support and overall economic conditions have generated turbulence in the aviation industry's financial performance (Gyanwali & Walsh, 2020). It is clear that the commercial aviation industry's traffic and exponential growth rate is outpacing the infrastructure that can sustain it. As a result, it is crucial for the industry to have adequate resources financially and to make optimal use of them in order to fund critical infrastructure projects (Saif-Alyousfi et al., 2020).

The net profit margin for global airlines was 2.5 percent in 2018. Since 2004, several airlines throughout the world have been able to achieve unprecedented margins of the net profit from their operations. In the sixteen years between 2003 and 2018, for eight years in a row, commercial airlines around the world posted positive net profit margins. This was mostly due to factors such a substantial growth in passenger traffic from around 2.1 billion to 4.3 billion, which represented a 100 percent increase, growth of the horticultural sector around the world, development of international trade and rampant rise of the tourism and hospitality sector. Despite the fact that the rise in passengers was anticipated to help the airline industry, many airlines have had terrible financial results over similar period (Zhong & Chen, 2018).

As a consequence of advancements in innovativeness, increased investments, increased air transportation demand, the commercial airline sector performance has been increasing world-wide (Saif-Alyousfi et al., 2020). The commercial airline sector has become one of the globe's fastest growing economic sectors over the world. Every industry in the world strives to boost its income and revenue levels in order to improve its overall financial performance. Revenue per kilometer (RPK), freight per kilometer (FTK), carrier quality of the services, and profit ratios are some of the metrics and measures used to assess airline performance (Saif-Alyousfi et al., 2020). Following the worldwide financial crisis, the commercial airline sector has faced difficult financial circumstances all over the world. Financial effectiveness may also be necessary to ensure airline success and promote their competitiveness in order to attract additional stockholders and customers. As a result, revenue inefficiencies may have a substantial effect on the airlines' financial survival.

The structure of a firm (financial) is made up of the various types of funding options it uses to fund its operations (Al-Hunnayan, 2020). Equity, (both ordinary and preferred equity) and debt, as per Bukair (2019), are the main components of a financial structure and represent the claims on a company's assets on the balance sheet of the firm. Financial distress, on the other hand, is described as a scenario in which a company is unable or unwilling to satisfy its financial commitments when they become due. Inadequate cash-flows, unpredictable revenues, and a drop in the assets-liability ratio are all the most common indicators of financial crisis in a firm, (Kalash, 2021). According to Khan et al. (2021), the financing element is important in predicting not only the company's not long-term financial outcome but also its long-term financial results but also its long-run survival.

The three basic ideologies in researching on the relationship and effects of the financial mix and set-up, the preferable sources of finances and profitability as well as financial performance of companies are ideally the pecking order hypothesis, the agency theory and the trade-off theory of capital structure. Myers (1977) proposed the tradeoff theory, which claims that using debt financing is often beneficial due to the related tax-savings cash flows. A tradeoff is done between the holding costs of equity finance against the tax saving benefits of debt so as to achieve the equilibrium amounts of equity and debt. The present value of the resulting cash flows, according to proponents of this idea, raises the overall firm value and promotes corporate financial stability. Theorists point out, nevertheless, that continuing to be in debt, and to use debt raises the likelihood of financial trouble. It becomes more difficult and costly to raise additional funds, either internally or externally, for new & profitable projects if financiers prove that the firm is in a financial crisis. As a result, the theory suggests for use an optimal financial mix containing an optimal mix of equity finance and debt capital.

On the contrary, the pecking order model establishes an order of preference, i.e. hierarchical order, for various available sources of finance to a firm. Firms opt for internal finance over external financing, as per Khan et al. (2021). Internal financing is good to the firm, according to the theorists, because it means lower costs of asymmetric information between members and possible investors. According to the hypothesis, corporations only use less hazardous forms of external funding, such as low-cost loan and then external equity, once their internal resources have been spent. As a result, the theory is critical in furthering the thesis that various elements of financial structures have distinct effects on company financial difficulty. Even though the theory somehow doesn't explicitly support the notion of an optimal financial system, it does advise for

managers to strike a balance between various forms of financing in order to maintain financial stability (Chaklader & Padmapriya, 2021).

Jensen and Meckling (1976), came up with the agency theory . This theory illuminates the connection between a company's agents or managers and its proprietors or shareholders. Disagreements between stakeholders and shareholders, as well as between executives and shareholders, might develop, resulting in lower levels of investment. According to Chaklader and Padmapriya (2021), a lease agreement that cannot be cancelled should be enforced so as to address the impediment of asset replacement because it forces the lessee to use leased property for the life of the lease contract.

The theory goes on to discuss how the relevant principal and agent are connected. As a result, it is noted that such relationships arise when one or more stakeholders engage other persons otherwise with the goal of assuring fulfilment of certain responsibilities as is highlighted on the covenant, thereby resulting an increase to delegation of authority to making financial decisions by the said agents (Benjamin & Phimister, 2020). Bukair (2019), on the contrary argues and contends that a firm's financial structure and financial performance is influenced by the institution's costs, which might comprise, but are not limited to, borrowing and shares funding.

1.1.1 Financial Structure

A firm's financial mix alludes to how it maintains its assets using all of its existing sources (Mathur et al., 2021). Firms typically finance just a portion of their assets using equity (retained earnings, preference shares, and ordinary shares) capital, with the remainder funded by liabilities and debt (long-term) (including such loans from banks,

bonds among others) and other liabilities (short-term), such as trade payables. Financial structure, according to Mielcarz et al. (2018), is capital structure and furthermore non-interest-bearing obligations such as payable accounts and accrued expenses. As a result, Miravittles et al. (2018) concur with Morri and Parri's (2017) definition of financial structure, which includes all short- and long-term obligations. The elements of a company's financial structure will be examined in this research: share capital financing, lease financing, retained earnings and loan financing.

One of the key causes for the progress in aviation in emerging nations in South and Central America has been lease financing. Industrial production and international trade have both benefited due to the upturn in low-cost airlines entering the aviation business. As a result, merely 110 out of 3,990 airplanes were leased in 1980, whereas 6,391 out of 18,595 airplanes were outsourced in the year 2012, accounting for 37.7 percent. By 2022, it is expected that financial leasing would account for half of all new aircraft sales (Saif-Alyousfi et al., 2020).

An airline's share capital financing comprises of SEOs and IPOs, which are used to raise finances by not taking debt but rather selling stock. Contrasting SEOs, IPOs are issued by carriers that have progressed past IPO with significant stock and performance that has at present been traded in the stock market, while an IPO is the initial sale of stock or equity on the stock market. Firms use share financing for a variety of reasons, including the requirement for capital for initiatives including such heavy procurement of machinery, R&D, and the lack of financing through debt and viable investment options (Zhong & Chen, 2018).

Debt finance is the borrowing of cash that should be repaid, both with and without interests. Commercial financing businesses, hire buy, common stock, credit union

funding, funding from friendships, household finance, and humanitarian organizations are all examples of commercial finance firms, supplier credit, and leasing arrangements are all examples of debt financing for enterprises. Resources-based banks, exchanging credit, technology provider, and stock brokerage firms, treasury securities, insurance firms, stock, and Small Companies Lending firms are among several sources (Al-Hunnayan, 2020).

The airline's net income is held after a certain reporting period, resulting in retained earnings. Whereas retained earnings are typically considered to be the strongest sources for medium airlines for most nations, some carriers have some varied equity-to-debt ratios due to their inability to generate retained earnings. In emerging airlines that are venturing into new markets, retained earnings are utilized to fund new investments. Businesses in the setup era, nevertheless, will not have adequate resources (financial) from the retained profits and would be restrained in their growth and development related initiatives if their initial developments have still not matured or if their capital investments are substantially bigger than their current income, according to the research. (Khan & Quaddus, 2020).

1.1.2 Profitability of Domestic Airlines in Kenya

Profitability refers to a company's ability to attain financial stability through its investment and operational activities, as measured by major financial metrics. Importantly, the institution's most important objective is to make money. All of the businesses' strategy and operations are geared toward achieving this lofty aim. This isn't to say that financial entities, such as airlines, don't have other objectives. Ratios are used to measure profitability. Profit margins and return on assets are two often used metrics (Saif-Alyousfi et al., 2020). Higher incomes, according to Din et al. (2021),

boost inner financing levels. Profitable businesses build internal reserves, reducing their reliance on external resources. Although profitable organizations might have easier accessibility to financing externally, the demand for debt financing might well be reduced if new projects can be supported from existing reserves (Eldomiaty, et al., 2017).

United States carriers were predicted to have the highest margins in profit in 2019, according to an IATA estimate issued in 2018, with a net income of \$16.7B, up from \$14.6B in 2018. In 2019, airlines in Europe were predicted to have a net income of \$7.5B, down from \$7.6B last year. In 2019, Asia-Pacific airlines were predicted to earn \$10.8B in operational profit, up from \$9.8B in 2018. In 2019, Arab World carriers were predicted to make a net income of \$801M, up from \$602M last year. In 2019, airlines in Latin American were predicted to generate a profit of \$701M, up from \$402M in 2018. African carriers were predicted to post a \$301M net loss in 2019, up from \$401M in 2018, maintaining Africa's position as the worst area, as it has been for years. Whereas airlines around the world are profiting, African carriers have not posted a profit since 2011 (African Airlines Association report [AFRAA], 2021).

From the preceding, it is evident that African airlines, especially those in Kenya, i.e. domestic airlines, face a variety of issues, including fierce rivalry, economic shocks, technological developments, and a dynamic business climate, to name a few. As a result, each firm shall need an effective, elaborate and effective financial management scheme and strategy. These schemes are considered vital and essential processes to reduce costs, increase profit margins, and increase return on investment (ROI). Taking these financial steps, nevertheless, necessitates a devoted financial management team and a committed workforce.

1.1.3 Domestic Commercial Carriers in Kenya

According to Prescott (2011), Kenya and other African countries approved the Yamoussoukro Proclamation on a Future Continental Air Travel Legislation in 1988. This declaration was created to ensure that airlines are connected and that regional regulatory bodies are established. This should be accomplished, among other things, by efforts such as the expansion of inter-state air facilities, the interchange of air transport liberties so that each country has easy accessibility, and the continued use of a fairness and transparency computerized reservation. Because no other Countries in Africa have signed the declaration, it has not been implemented (Khan & Quaddus, 2020).

Kenya is a country in the Africa continent. To meet the increased need for commercial global transportation, significant efforts have been made to upgrade the domestic commercial aviation industry. Since trade between Kenya and the entire globe has been more open in recent years, air transportation demand has increased dramatically. Other factors that has led to growth in air transport include growth in tourism and hospitality industry, horticultural product export and import, and easier, cheaper, and faster transportation of people from one community to another (Liech, 2011). As per Irandu (2010), a functional nationwide air transportation system is a complement to the sub-poor region's ground transportation system.

Throughout Kenya, commercial airlines run routes connecting locations of choice. This has given airline companies the opportunity to earn more money. On the other hand, popular paths were subjected to higher competition. Carriers have been increasingly concerned with reducing their costs due to increasing competition in the air transport industry, which has put lower influence on ticket prices. The airline business has evolved into a more adaptable industry. Many troubled airlines reported economic

troubles, layout changes, and cancelled flights as a result of this. Numerous popular airlines needed financial assistance, which came in the form of governmental funding, mergers, or a collaboration (Farah, et al, 2018).

1.2 Statement of Research Problem

The Kenyan commercial air carrier business is projected to have generated \$2.0 billion to the nation 's Economy in 2018 (International Air Transport Association [IATA], 2019). Nevertheless, the aviation industry's share in GDP has fluctuated over time, with 0.5 percent in 2010, 0.3 percent in 2013, 0.21% in 2014, 0.31% in 2017, and 0.41% in 2018 (Kenya National Bureau of Statistics [KNBS], 2019). Moreover, the industry's performance has been unpredictable, for instance, a 0.30% decline in 2013, a 1.11 percent decline the following year, and a 1.40% decline in 2015. Nonetheless, it had successive increase in 2017 and 2018, with growths of 5.41 percent and 6.80 percent, respectfully (KNBS, 2019). While national airline companies have experienced varying growth, their earnings have always on the downturn, Kshs 9 billion loss in 2018 especially in comparison to kshs 7.2B in the year before, the cost of leasing went up to kshs 17B in the 2018 financial year, an increase from kshs 14.2B in the 2017 financial year and kshs 13.4B in the 2016 FY, and financial leverage stretch to the highest peak of kshs 24B in the 2018FY.

Management, shareholders, financiers, workers, and the state as a whole are all concerned about this predicament, as per Altman and Hotchkiss (2010). Should the company collapse, the management' careers and individual reputations will be in jeopardy. When a company is having financial difficulties, thus according Zhong and Chen (2018), the workforce' basic welfare is jeopardized. When a company fails to pay its financial commitments, shareholders and financiers' equity positions and interests

are jeopardized (Bender, 2013). As an outcome of company failure, the state faces lower tax revenues as well as significant impact on economic growth (Wei & Kong, 2017).

Kaumbuthu (2011), researched the influence of financial structure on the profitability of the manufacturing and associated companies at the NSE over the years 2003 to 2009, and discovered an adverse influence of debt - to - equity on ROE. The research used a non-experimental explanatory study design. Kondongo et al. (2015) researched the leverage effect on the financial efficiency of listing enterprises in Kenya, finding a strong adverse influence of debt on profit but no influence on company value. A diagnosis survey method was used in this investigation.

From the foregoing, it is evident that there are both contextual and methodological gaps in most of the past studies reviewed above. None of them had examined the share capital finance, lease finance, debt finance capital, and retained earnings as the main elements of a financial structure, and their effect on the profitability of domestic commercial airlines in Kenya, measured by net profit margin, on a broad scale as undertaken in this study. Similarly, the previous studies adopted a quantitative research design, diagnostic research design, and explanatory non-experimental research design. This study adopted a casual research design. The current study, therefore, aimed to close these contextual, conceptual, and methodological gaps by taking a more comprehensive perspective to both background and design of the study.

1.3 The Objectives of the Study

This study aimed at fulfilling the following objectives,

1.3.1 The Main Objective of Study

The general/main/major goal of this study was to establish how financial structure of the domestic commercial airlines in Kenya determines the level of profitability/return of the firms.

1.3.2 The Minor Objectives of the Study

The study sought to address the below highlighted minor and specific objectives.

- i. To determine how different levels of share capital finance usage relate with net profit margin levels of domestic commercial airlines in Kenya.
- ii. To determine how different levels of lease finance usage relate with net profit margin levels of domestic commercial airlines in Kenya.
- iii. To determine how different levels of debt finance usage relate with net profit margin levels of domestic commercial airlines in Kenya.
- iv. To determine how various levels of retained earnings use relates to net profit margin levels of domestic commercial airlines in Kenya.

1.4 Research Hypotheses

This study aimed at testing the four study hypotheses listed below:

H₀₁: There is no positive and significant relationship between profitability reported and amount of share capital finance used by domestic commercial airlines in Kenya.

H₀₂: There is no positive and significant relationship between profitability reported and amount of lease finance used by domestic commercial airlines in Kenya

H₀₃: There is no positive and significant relationship between profitability reported and amount of debt finance used by domestic commercial airlines in Kenya.

H₀₄: There is no positive and significant relationship between profitability reported and amount of retained earnings used by domestic commercial airlines in Kenya.

1.5 Significance of the Study

A variety of stakeholders with an interest in Kenya's airline industry will find this study extremely useful. Airlines' executives are better placed to make better financial decisions that meet the qualities that ensure their companies' exceptional performance. The findings will assist the airline regulator, Kenya Civil Aviation Authority, in crafting regulations that will facilitate proper regulation of the airlines industry while maintaining profitability.

The state will also have knowledge to use in developing legislation to assist commercial carriers improve their financials, features and structure in order to assure their longevity. Government legislation & policies usually influences the formation and structure of commercial airlines, which has a significant impact on their financial structure and profitability. From such policies, commercial airlines in Kenya will be at a great position to avoid bankruptcy, financial distress and hostile mergers and acquisitions.

Academicians will profit from the outcome of this study since it will add to the present literature on the issue of the impact of financial structure on profitability. This may be beneficial to future study scholars who may want to use this information as a guide. The research revealed important knowledge gaps that future scholars may be interested in filling. Scholars will as well be able to criticize financial research and theories.

1.6 Scope of the Study

This research was restrained only to the eleven domestic airlines registered in Kenya, whose data was available within the study period. Sources of secondary data collected and analyzed in this study included government and institutional websites and archives like Kenya Civil Aviation Authority and AFRAA, which had audited annual financial statements and other relevant financial information. This study undertook to establish how varying levels of NPM as a measure of profitability relate to usage levels of our four main components of financial structure of domestic commercial airlines in Kenya. Financial structure was broken down into four components which formed our four independent variables. These four financial structure components examined included share capital finance, lease finance, debt finance and retained earnings. The indicator of profitability was net profit margin. On contextual scope, the study targeted a population of the 11 domestic commercial airlines. On time scope, this study considered data for a period of 10 years, i.e. between year 2012 to year 2021

1.7 Study limitations

Because it was aimed to research and comprehend specific elements within our jurisdiction only, a research of this nature has some inherent limits. Because the research was limited to the aforesaid specific characteristics, it cannot be applied to all other aspects and variables of the airline sector worldwide. As a result, the conclusions cannot be applied to other countries because each country has unique traits and conditions. The investigation only covered a span of ten financial years, i.e. from 2012 to 2021. This time frame was insufficient to investigate how many elements will vary over time and the impact these changes will have on profitability. Lastly, this study

assumed the effect of Covid-19 pandemic in year 2020 and part Of year 2021 to the profitability of the airlines.

1.8 Assumptions of the Study

The essential assumption that was taken by this research was that the variables/components in a firm's financial structure are only share capital finance, lease finance, debt financing, and retained earnings, which are the research independent variables. These factors have an impact on the profitability of Kenya's domestic commercial airlines. The study also assumed that the best and most appropriate measure of profitability was Net Profit Margin

1.9 Definition of Key Study Terms

Debt Financing: This is the method by which an airline funds its assets by borrowing lengthy and short terms money from financiers (Eldomiaty, et al., 2017).When a firm borrows monies, in form of secured or unsecured loan, to be repaid at a future date with accrued interest amounts is known as debt financing.

Lease Financing: A contract that allows a lessor to keep control of an asset while the lessee utilizes the asset's services for a fixed length of time (Zhong & Chen, 2018). Lease finance is categorized into either an Operating lease or a finance lease depending onto who has the rights to rewards and risk of the asset.

Retained Earnings: The carrier's net earnings after payouts that is kept after a certain accounting periods (Khan et al., 2021). Retained earnings can also be defined as the portion of net profits made by a firm that is not distributed to shareholders, but is re-invested to profitable projects of the firm. It represents an internal source of funding that is readily available to the firm and can be used to invest in new and heavy capital-intensive projects like research & development.

Share Capital Financing: The procedure for raising funds through the selling of stock (Chaklader & Padmapriya, 2021). In simpler terms, share capital finance is the amount of capital that the owners or shareholders of a company have injected in the operations of the firm, either in terms of common shares or preference stock.

Lease value: It is the entire amount given to the borrower for the privilege of utilizing the loaned item (Mathur et al., 2021). Lease Value means the aggregate base rent payable over the term of the lease, not including any free rent periods or extension terms, provided that extension terms or renewal options shall be included once such extension options have been exercised.

Value of share: It refers to the entire amount of money raised from the selling of stock (Khan & Quaddus, 2020). It is the measure

of the current market prices of a share as quoted on the stock exchange. The value of share can be calculated by dividing total value of the firm by the total number of issued and paid shares.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This topic introduces the two main parts of literature review, i.e. Theoretical review and empirical review. Theoretical part of literature review includes a discussion of the theories that are important to the study of the variables involved in the study. Empirical review on the other hand involves examination of already-done researches that touches on the area of the study. The importance of doing an empirical review in our study is to be able to explore the relevant researches which might have been done in an attempt to study profitability and financial structure in other industries, as well as compare our results. This study also did the conceptual and operational frameworks to show the relationships between the variables under study. Three theories that have been discussed below, i.e. the trade-off theory, the pecking order theory and Agency theory, were used as the basis of forming the theoretical framework of this study. Numerous studies done domestically and outside Kenya on financial structure and profitability were reviewed as part of the empirical literature review.

2.2 Theoretical Literature Review of the Study

This study was founded on three theories that tries to discuss how various components of the financial structure influence the profits of a firm. The three theories were discussed below, with their relevance to the topic of study also highlighted.

2.2.1 Capital Structure Trade-Off Theory

According to the theory, particularly defines the financing structure research, a company's optimum financing composition is established by weighing the profits and losses of debt funding. This theory, which sprang from the works of Miller and Modigliani (1963), was developed in response to the harsh criticism thrown at their irrelevance thesis due to its perfect economic assumptions. Recognizing that taxes existed in the actual world and that arbitrage operations are sometimes not viable, the authors demonstrated that capital structure does impact business market value (Kalash, 2021).

They contended that by integrating the impacts of corporation taxes and easing the premise on the presence of arbitrage, debt interest, becoming tax deductible, delivers additional cash flows to the highly leveraged business in terms of interest on savings, which raises the firm's value. As a result, the theory maintained that leveraged enterprises had higher market value than un-levered firms under scenarios of long-term debt, principle amount of loan, and marginal (static) rate of tax. This is due to the current value of the annual tax exemption connected with debt funding.

According to the trade-off hypothesis, Miller and Modigliani (1963) shown that the advantage of debt is essentially the shield against tax impact that results from the interest charges deductibility. Myers (1977) merged this framework with the insolvency cost frameworks of and Scott (1976) and Litzenberger and Kraus (1973) to develop the basic static trade-off theory, in which debt costs are primarily connected with indirect and direct bankruptcy costs. These entail administrative and legal expenses, as well as more-subtle charges arising from a damage to reputation among consumers and a loss of confidence among employees and partners as a result of uncertainty. Nevertheless,

the agreement is that insolvency costs solely are insufficient to counteract the benefits of tax shelters, and that extra considerations must be considered in a broader cost and benefit analysis of indebtedness (Khan et al., 2021). As a result, Jensen and Meckling's (1976) agency costs framework of is also regarded in the model.

This theory is relevant to this research because it gives a clear explanation of the elements of tax-saving, also known as tax-shield benefit, associated with debt can increase the value of a firm. Furthermore, the theory presents the capital structure notion, and also the agency problems and bankruptcy cost, and demonstrates how the financing mix can have adverse effects on the company by raising the agency costs associated with debt finance.

2.2.2 Pecking Order Theory of Corporate Finance

Majluf and Myers (1984) added the asymmetry in information factor to Donaldson's previous pecking order model (1961). They contended that the presence of asymmetry in information between both the company and capital providers leads the comparative costs of funding to differ between the various sources. Internal sources of financing, for example, if the funds supplier is the company, will have more facts regarding the business than outside financiers like equity holders and debt holders, and hence these outsiders would expect a greater rate of ROI. This indicates that obtaining external capital is more expensive for the company than employing internal money (Bukair, 2019).

Another aspect of showing how asymmetric information influences the financing mix of a firm, under typical settings, is the fact that the insider stakeholders, who mainly comprise the shareholders and management, have more information & awareness

regarding the company's potential earnings than outsiders. Because of this lack of symmetric information and knowledge, outsiders devalue the company.

In contrary to the trade-off theory, this approach regards interest tax shelters and the risk of insolvency to be unimportant concerns. According to the notion, gearing ratios are altered when outside funds are required due to a mismatch between internal inflows and real investment opportunities. This means that only companies whose investment demands outstripped their ability to produce funds domestically would need to take on extra debt. As per Myers (2001), every company's debt ratio is a representation of its accumulated need for external finance, and prosperous firms with restricted expansion options will always utilize their retained profits to pay off debt instead of repeat purchases of shares under the pecking order concept (Sethi, 2018).

The pecking order hypothesis implies that there is a distinct finance hierarchy and there is no well-defined optimum debt ratio, as stated by the trade-off theory. To protect value and business stability, this idea suggests that internal funds should be preferred above external funds that combine equity and debt. The result is that higher usage of external financing, such like equity and debt, has an adverse impact on business value, which in turn has an adverse impact on profits (Wei & Kong, 2017).

2.2.3 'Agent-Principal Problem' Hypothesis

Jensen and Meckling developed the agent-principal hypothesis (1976). The idea discusses the link between a company's agents or managers and its proprietors or stakeholders. An agency is a relationship that involves a principal and an agent, where the agent represents the principal in financial transactions. Disagreements amongst the agents and principals, e.g. shareholders versus managers, might develop, thus resulting

in lower levels of investment. According to Chaklader and Padmapriya (2021), a non-cancellable lease can be utilized to address the problem of asset replacement because it forces the lessee to use leased property for the life of the lease contract.

This hypothesis goes on to discuss the relevant relationship between principal and agent, and how their actions are inter-connected. As a result, it is noted that such relationships arise when one or more stakeholders engage other persons otherwise with the goal of assuring fulfilment of certain responsibilities as the covenant stipulates, thereby giving rise to agents the delegated authority to make financial decisions (Benjamin & Phimister, 2020). Bukair (2019), on the contrary, urges and contends that the financial structure and financial mix of a corporation is influenced by the institution's costs, which might comprise, but are not limited to, borrowing and shares funding.

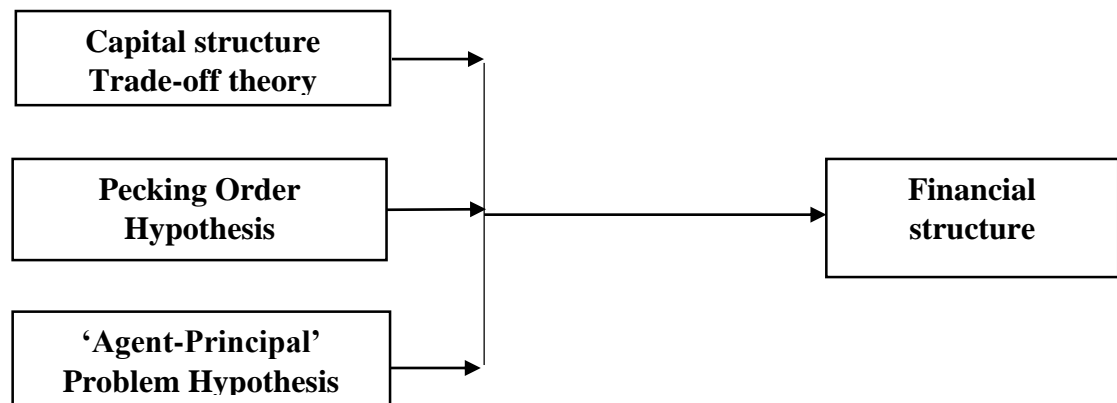
Shareholders might under invest in riskier borrowing in the firm's financial structure by discontinuing investment since the project's benefits for current debt owners and the current debt cost makes the firm's expenditure on external capital markets too expensive. According to Paulo (2018), the challenge of lack of investment must be alleviated by non-cancellable long-term leases owing to debt burden. Nevertheless, in the case of short-term operational leases, the cost of agencies may also exist between a lessor and a lessee owing to the separation of ownership from the use of property. Because the tenants have really no title to the asset's resale value, they have no motivation to take excellent care of it. This underscores why businesses hire office space far more frequently than they do R&D facilities or facilities (Al-Hunnayan, 2020).

Assaf and Tsionas (2020) investigate whether leasing financing used to monitor debt spending for the agency is being utilized to replace or augment company management, management incentive remuneration used to control the agency's share finance costs. They find rental complements and incentive compensation, implying that enterprises are attempting to reduce both debt agency expenditures and domestic share financing at the same time. According to this hypothesis, leasing financing and share finance contribute to better corporate management, which improves the financial performance of aviation firms.

2.2.4 Theoretical Framework of Study

Figure 2. 1

Theoretical Framework



2.3 Empirical Literature Review of the Study

This study reviewed previous done empirical studies from different authors who had researched on any variable indicating financial performance and profitability, as discussed in the section that follows herein. Studies undertaken in various jurisdictions across the world touching on the study variables were reviewed

2.3.1 Lease Finance and Profitability

A lease is a contractual obligation where the lessee, (borrower) gets the right to use an asset for some specific period of time, and in return make structured and timely instalments towards the lessor, (owner of asset). In order to review the influence of lease financing on the financial performance and overall health of a firm, this study reviewed various studies discussing variables such as use and application of leasing finance, impact of debt replacement on the financial performance of a firm, expenditure on agency and use of reserves and its impact on financial performance of a firm. Benefits arising from use of lease finance are deemed to exceed the costs associated to use of debt finance in a company. Meziane, (2007) investigated on the economic causes and their economic consequences of using lease finance in real estate holdings in Spain. The study examined a total of 2,343 British Listed firms within the years 1988 to year 2001, which yielded 17,868 aggregated series data inferences. The study showed and concluded that firms in the growing and expanding phases of growth are much less likely to be able to attract and obtain low-cost funding options for purchase of assets necessary for expansion. Therefore, such firms rely heavily on lease financing to support the acquisition of necessary assets needed for growth. The study however leads to massive conceptual and contextual research gaps since it was done in a developed country and in a different industry.

In Paris, France, in 2020, Phimister and Benjamin investigated on lease finance profits levels. The study made 7,103 annual observations into the data panel, and concluded that lease financing had an impact on the financial performance and stability of a firm. The study only concentrated and targeted on the standard and poor enterprises, hence making it difficult to infer industry-wide observations.

In 2021, Mohammad and others investigated the financial factors that effects the financial performance of leasing companies in Pakistan. The study analyzed twenty-eight leasing firms between year 2006 and year 2008. The researchers used various parameters that included size of firms, leverage levels of firms, liquidity levels of firms, ae of firms and net investment in leasing finance to evaluate the profitability of the firms. The researchers utilized both normal least square models, (OLS) and logistic models, (logit) to estimate the outcomes. This study showed that leasing firms' profits were positively correlated with their scales, net capital in lease financing and cash, but negatively correlated with debt level and maturity. From this study, there is conceptual and contextual gaps due to lack of management of retained earnings and debt finance.

In Bangladesh, using a variety of SMEs, Salam (2013) studied the empirical relationship between a firm's financial performance with levels of lease financing by use of both ROE and ROA. The study investigated amongst 54 SMEs, the relationship between lease finance and financial profitability of these SMEs. The research indicated that for medium-sized enterprises, lease financing and financial profitability were linearly correlated. This was the same case for the small-size firms. From the study, a contextual and conceptual research gap exists since net profit margin was not used as the parameter for measuring profitability, and this research was done in a different jurisdiction and in a different industry.

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2.3.2 Share Capital Finance and Profitability

According to the corporate finance theory, there are two main types of equity financing, I.e. internal equity and external equity. Internal equity can be described as the portion of cash generated by business operations but has not been released to shareholders as part of dividends. These includes retained earnings, reserves and savings. According to Padmapriya and Chaklader (2021), any form of funds that is accessed from outside the business, but excludes debt finances is known as external equity financing. The effects and empirical relationship between a firm's level of equity financing, both internal and external, and financial performance and position are postulated by the pecking order theory. Various financial researches, for instance Morri and Parri, (2017) and Widnyana et al. (2021), show that firms prefer internal sources of finance to external sources.

Various ways have been used to explain preference of internal financing by firms. For firms in their launch stage, management teams are more flexible in using internally generated funds. Thus, these management teams can easily and timely fund and execute investment strategies using internal equity. These firms will seek for debt finance in the foreseeable future, and when such a need arises. Secondly, a firm saves itself from incurring processing and floatation fees when seeking funds internally, costs that must be incurred for external finances. Thirdly, there exists asymmetric information between a firm's management team and its shareholders about the investment opportunities for a firm. Following this precedent, Khan and Quaddus, (2020) confirmed and concluded that market share prices react negatively to new information about issuance of ordinary shares, hence affecting a firm's financial performance.

Using a sample size of 194 companies in the United States, Park and Pincus conducted a study in 2018 to establish how the companies' earnings return coefficients was affected by respective firms' equity structures. For that study, the dependent variable was cumulative abnormal returns, while the independent variables included internal equity-external equity ratio, unexpected earnings and leverage ratio of the firms. The study controlled the business growth rates and investment opportunities. The study found a positive and significant relationship between internal equity-external equity ratio and the earnings coefficient. Therefore, the study made an inference that firms that used more of internal equity finance had a higher profit margin as compared to those using more external equity finance. The inference made in this study varied from those of a research done by Frijins et al. (2017) of 112 Greek companies, which conclude that equity financing had no significant effect on business value, estimated by the Tobin's Q.

Elsas et al. (2014) investigated 977 German-based companies that made large investments between 1988 and 1998. The goal of the research was to see how externally and internally sources of funding influenced a company's performance in terms of long-run abnormal stock returns. This was accomplished by first determining the most common source of funding for every project, and then isolating the valued consequences of that investment from the effects of financing decisions. External sources of funding included debt (long and short term) and externally issued equity (both ordinary and preferred shares), whereas internal equity consisted of cash flow from operating activities. Fama and French (2013) used a three-factor model to identify the survey's predictor variables (long-term stock performance). The research discovered that investments that were primarily supported from within sources outperform investments that were primarily funded externally. Nevertheless, the results differed

with those of Richardson and Sloan (2003), who found that cash from freshly issued securities merely substitutes other funding source, similar to how a maturing bond is substituted by another. He went on to say that newly issued securities allowed the company to grow quicker than it could with only internal finances.

Brown (2005) evaluated the companies' performance in terms of asset and revenue growth, Tobin's Q, and operating performance over time. The findings demonstrated that venture-backed enterprises had lengthier survival periods than non-venture-backed companies after controlling for size and age. They also announced better growth rates and improved operating results. As a result of this overreliance on internal sources of capital, the research determined that high-tech enterprises were denied possibilities for expansion, resulting in greater levels of cumulative leave rates. The findings are consistent with those of Sciascia and Mazzola (2008), who found that enterprises with a large amount of external equity performed better in terms of profitability and thus stock returns than firms that were domestically funded. He ascribed this trend to better management accountability and accountability.

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2.3.3 Debt Finance and Profitability

Debt can be defined as any amount advanced to, and must be repaid back, with or without interest, by a borrower. Abu and Abbadi (2019) conducted a study to show what impact did using debt finance have on the profits of companies that were listed on the Palestine Stock Exchange. The study used a sample size of 29 firms between a period of five years, i.e. 2014-2018. That study used two ratio measures of leverage, which were total debt/total assets and total debt/total equity, whereas financial profitability was measured by return on equity. The study found out that use of debt finance had a positive and significant impact on the levels of profits. The researchers concluded that firms which used more debt to fund their operational activities managed to have much retained earnings and dividends due to the effect of interest-tax savings on net income. These findings concurred with those of a study done by Nerlove in 2018, on Bangladesh and Turkish companies, which found a positive and significant association between ROA and use of debt finance.

In Sri Lanka, another study was done by Khan and Quaddus, (2020), trying to establish how financial profits Sri Lankan firms that were registered on the Colombo Stock Exchange was affected by use of debt, between 2005-2009 period. The study used the ratio metrics of debt-equity and total debt-total capital to estimate leverage, while profits were measured by both gross profit and net profit margins. The study reported a weak and insignificant relationship between profits and use of debts. This implied that

profit levels were influenced by use of debt at very minimal scales. However, in 2012, Hung and Others established a positive and significant association between leverage levels and profits in Hong Kong's property and construction sector. Profitability was measured by return on equity.

According to the corporate finance theory, there are two main types of equity financing, I.e. internal equity and external equity. Internal equity can be described as the portion of cash generated by business operations but has not been released to shareholders as part of dividends. These includes retained earnings, reserves and savings. According to Padmapriya and Chaklader (2021), any form of funds that is accessed from outside the business, but excludes debt finances is known as external equity financing. The effects and empirical relationship between a firm's level of equity financing, both internal and external, and financial performance and position are postulated by the pecking order theory. Various financial researches, for instance Morri and Parri, (2017) and Widnyana et al. (2021), show that firms prefer internal sources of finance to external sources.

Various ways have been used to explain preference of internal financing by firms. For firms in their launch stage, management teams are more flexible in using internally generated funds. Thus, these management teams can easily and timely fund and execute investment strategies using internal equity. These firms will seek for debt finance in the foreseeable future, and when such a need arises. Secondly, a firm saves itself from incurring processing and floatation fees when seeking funds internally, costs that must be incurred for external finances. Thirdly, there exists asymmetric information between a firm's management team and its shareholders about the investment opportunities for a firm. Following this precedent, Khan and Quaddus, (2020) confirmed and concluded

that market share prices react negatively to new information about issuance of ordinary shares, hence affecting a firm's financial performance.

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2.3.4 Retained Earnings and Profitability

A study undertaken by Ouma in 2012 tried to investigate the link between dividend payout ratio and financial profitability for firms listed in NSE, between 2002 and 2010. The study established a positive and significant relationship between the said variables using regression analysis. According to its findings, the study found that return on investments was significantly affected by dividend payments of the firms considered in the study. Companies' management teams' desires to retain more of the generated profits to enhance their development chances within respective industries. This also makes it possible for firms to take advantage of current investment opportunities in the

market, and also reduce competition levels from rivals. Shareholder on the other hand would prefer lower retention rates, which would result to high dividends.

A research done by Thurani, (2014) on the effects of using retained earnings as a source of investment capital on the profit levels. The study found out that there is a major correlation between amount of retained earnings used as investment capital by a firm and the rate of development of the firms. Various studies have shown that retained earnings are recorded in the shareholder's equity account balances. Ratios can also be used to indicate the amount of retained earnings from profits made by a firm. These financial ratios are known as retention or plough back ratios. Orwel, (2010) referred the as retention rates in his study.

A study by Kanwal, (2018) showed a positive and significant relationship between financial performance of a firm and retention ratio. This study explained the variances in prices of inventories in the pharmaceutical and chemical sector in Pakistan. The general view on retained earnings is that the more a firm increase it, the more it increases its growth prospects.

2.3.5 Financial Profitability

According to Kosimbei, et al. (2014), there exists a negative relationship between financial performance and financial control of a firm. The researchers applied the expounding non experimental research method so as to unearth the relationship between capital structure and financial success.

The study recommended for less use of widespread debt finance in the operations of firms so as to avoid high financial leverage levels. Leverage level indicated the amount of debt used in comparison to equity amount. Despite the task of balancing between

optimal use of equity and debt being tedious and complex, managers must be aware of the efficient and effective proportions to be given to each source of finance. The study recommended for the application of a balanced-optimal financial structure by firms.

A study by Kalaiselvan, et al. (2015) researched on financial performance between years 2008-2012. The study indicated a negative relationship between income/revenue and operational expenses of a firm. A conclusion was reached that financial analysis was an important technique in business control and regulation, since financial analysis gives signals when analyzing the financial performance within a particular period of time. However, reports from financial analysis may not show all the details necessary to evaluate financial performance of a company.

According to Ganga and Suriya (2015), great emphasis & interpretation should be given to any statistical information found on the financial statements of a firm as this will result to better financial decisions. As a result, investor and financiers will be in a pole position to better understand the financial health and position of the firm.

A study was conducted by Fadae and Chashmi, (2016) with an aim of establishing how a firm's financial health determines its success and business progression for firms listed in the Tehran Stock Exchange. The researchers concluded that there was significant relationship between business success/failure with ROA and Earnings Per Share. On the contrary, the study highlighted that business success/failure had no significant relationship with ROE. Thus, following the above conclusions of the study, it became clear that the factors that affect financial performance of a firm included EPS and ROA, but excludes ROE. The study recommended for a prudent and continuous assessment of the two financial parameters so as to keep financial performance of a firm on check. It also recommended for proper, efficient and effective financial policies and practices

which will enhance growth of business, thus promoting its financial performance. Therefore, firms with positive financial performance indicate a healthier financial position, which benefits the firm from increased number of willing investors and the ease to access funds at lower costs, either internally or externally. This is well reflected on the financial structure of the firm.

Profitability refers to a company's ability to attain financial stability through its investment and operational activities, as measured by major financial metrics. Importantly, the institution's most important objective is to make money. All of the businesses' strategy and operations are geared toward achieving this lofty aim. This isn't to say that financial entities, such as airlines, don't have other objectives. Ratios are used to measure profitability. Profit margins and return on assets are two often used metrics (Saif-Alyousfi et al., 2020). Higher incomes, according to Din et al. (2021), boost inner financing levels. Profitable businesses build internal reserves, reducing their reliance on external resources. Although profitable organizations might have easier accessibility to financing externally, the demand for debt financing might well be reduced if new projects can be supported from existing reserves (Eldomiaty, et al., 2017).

United States carriers were predicted to have the highest margins in profit in 2019, according to an IATA estimate issued in 2018, with a net income of \$16.7B, up from \$14.6B in 2018. In 2019, airlines in Europe were predicted to have a net income of \$7.5B, down from \$7.6B last year. In 2019, Asia-Pacific airlines were predicted to earn \$10.8B in operational profit, up from \$9.8B in 2018. In 2019, Arab World carriers were predicted to make a net income of \$801M, up from \$602M last year. In 2019, airlines in Latin American were predicted to generate a profit of \$701M, up from \$402M in

2018. African carriers were predicted to post a \$301M net loss in 2019, up from \$401M in 2018, maintaining Africa's position as the worst area, as it has been for years. Whereas airlines around the world are profiting, African carriers have not posted a profit since 2011. (AFRAA, 2021).

From the preceding, it is evident that African airlines, especially those in Kenya, i.e. domestic airlines, face a variety of issues, including fierce rivalry, economic shocks, technological developments, and a dynamic business climate, to name a few. As a result, each firm shall need an effective, elaborate and effective financial management scheme and strategy. These schemes are considered vital and essential processes to reduce costs, increase profit margins, and increase return on investment (ROI). Taking these financial steps, nevertheless, necessitates a devoted financial management team and a committed workforce.

2.3.6 Research Gaps

The focus of this research was to establish the relationship between financial structure components, i.e. share capital finance, lease finance, debt finance and retained earnings on profitability, i.e. Net Profit Margin, of domestic commercial airlines in Kenya. The empirical review and critique of existing literature identified the following research gaps: First, there is limited evidence of studies conducted on the relationship between financial structure and profitability of domestic commercial airlines in Kenya, since most of the studies on financial structure and profitability have been in other countries especially the western countries (Chandra et al., 2019; Haron et al., 2021; Kyissima et al., 2020).

Secondly, this study employed three theories to assess the relationship between financial structure and profitability of domestic commercial airlines, i.e. The trade-off

theory, agency Theory and the pecking order theory. These three theories have not been tested before with emphasis in financial structure under the same data in Kenya (Abadi & Abu-Rub, 2019; Alfaro-Saiz et al., 2019; Al-Hunnayan, 2020; Din et al., 2021; Kalash, 2021; Khan & Quaddus, 2020). The third research gap is that studies that were carried out including, but not limited to, Alfaro-Saiz et al. (2019), Howe and Robinson (2018), Eldomiaty et al. (2017), and Frijns et al. (2012) did not focus on the domestic commercial airlines in Kenya, and therefore presented a conceptual gap that this study sought to fill. Lastly, relationship between the four independent variables used in this study as financial structure components, and profitability when measured by NPM, have not been examined within the Kenyan context, nor within the airline industry.

2.3.7 Summary of Literature Review

The first portion of this chapter indicated the three theories used in the study namely the trade-off theory, agency theory and the pecking order theory, that formed the baseline of our literature concerning the study variables. The discussion of the theories showed how the theories are connected to the study variables of this study. This chapter also outlined what is known and already researched concerning the study variables under the empirical review section. The study captured the research gaps that these various studies hoped to fill, and which remained unfilled. The achievement of the specific objective based on the mentioned variables was the main focus of the study. The literature review showed the gaps of knowledge that this study hoped to fill.

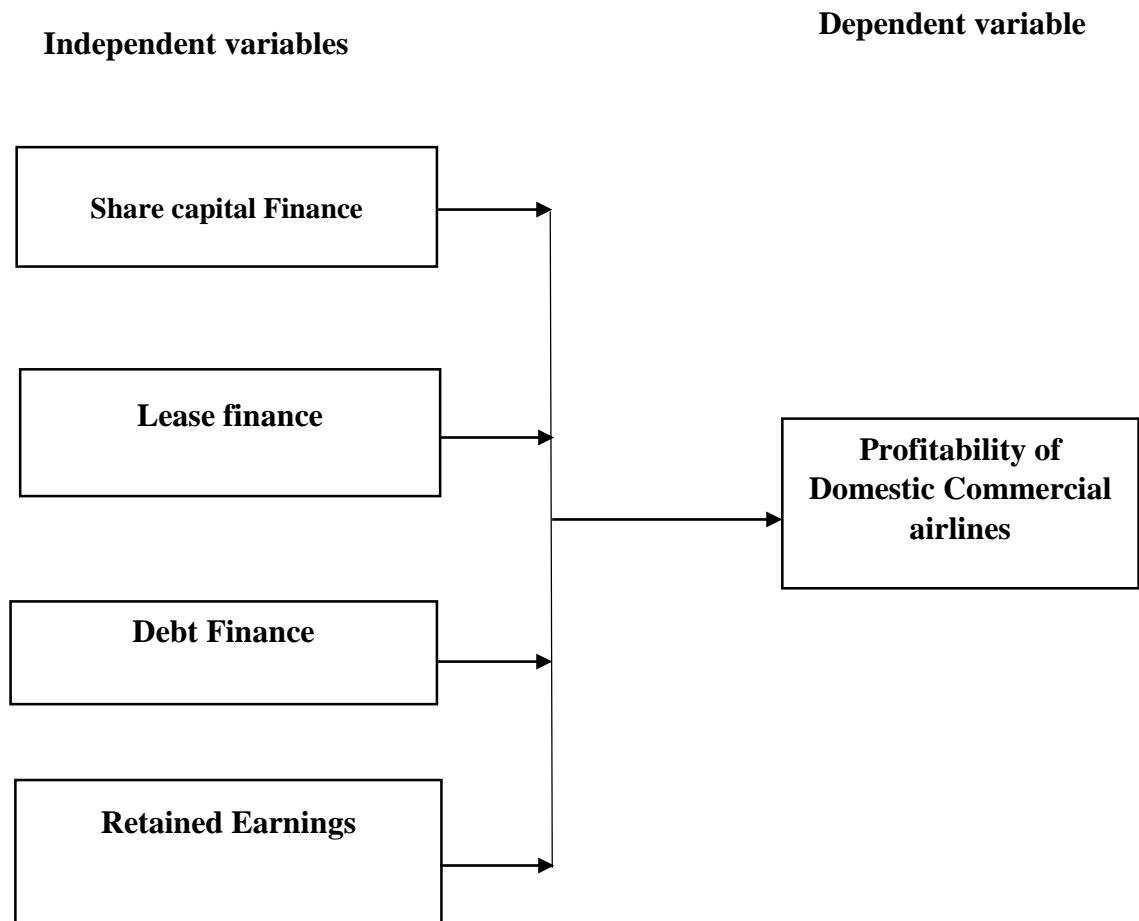
2.4 Conceptual Framework

A conceptual framework is a pictorial depiction of the connections between the research's independent variables and the dependent variable (Morri & Parri, 2017). The

below conceptual framework shows the interaction between individual independent variables comprising the financial structure and the profitability. It is based on the theoretical literature studied by the research.

Figure 2. 2

Conceptual Framework



2.5 Operationalization of Study Variables

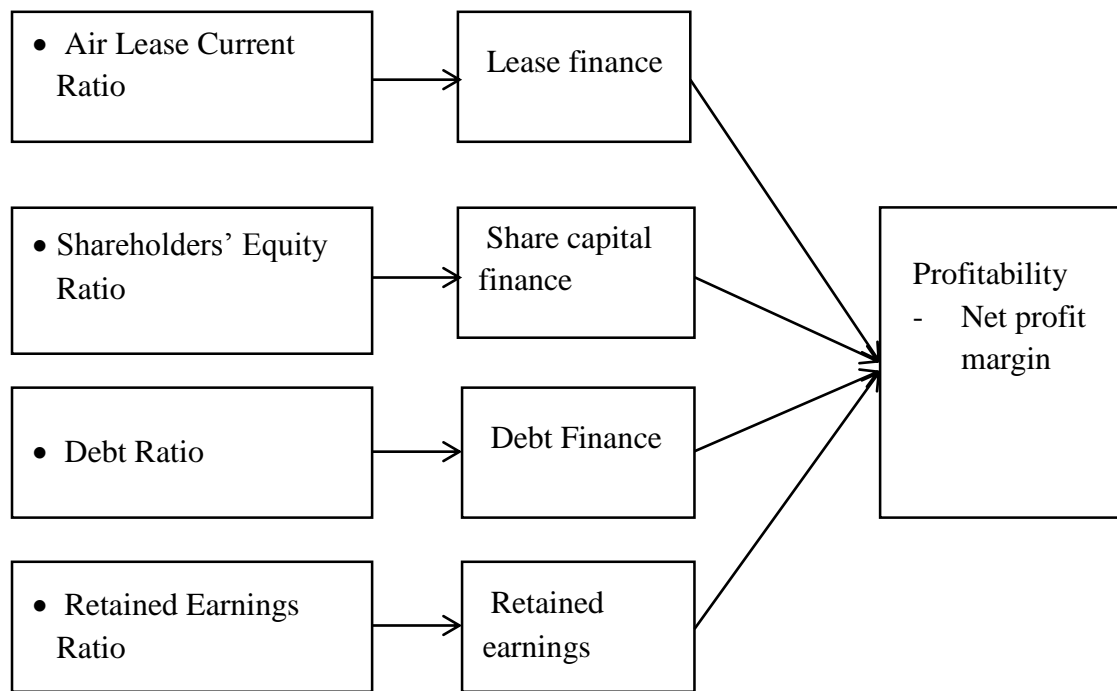
Figure 2.3 presented the operationalization of variables framework showing the measurability of all the variables, i.e. measurement parameters of the independent variables and the dependent variable. Profitability of the firms, which indicates the financial performance, was measured by the Net profit margin ratio. Shareholder's

equity ratio was used to measure use of share capital finance by the airlines in their respective financial structures. This ratio indicated how the firms have grown their asset base by issuing stocks rather than using debt finance. The lower the ratio, the more the debt used by a firm in acquiring company assets.

Lease finance variable was measured by air lease current ratio, which shows the value of current assets financed via leasing and short-term debts. Debt finance variable was measured using the debt equity ratio, which shows the amount of long-term debt used as a source of finance compared to equity finance. Lastly, retained earnings was measured using the retention ratio, which shows the amount of net profits used as a source of finance rather than being distributed as dividends.

Figure 2. 3

Operational Framework



Parameters

Independent variable

Dependent Variable

Source: Author (2023)

This study aimed at establishing both the significance, strength and direction of relationship between profits, measured by net profit margin, and share capital finance of domestic commercial airline in Kenya. This variable was measured using the shareholder's equity ratio, which determines how much of share capital finance is used by the firm compared to other sources of finance. The study was determined to establish both the significance, strength and direction of relationship between profits, measured by net profit margin, and the lease finance element of financial structures of domestic commercial airline in Kenya. This variable was measured by air lease current ratio, which shows the value of current assets financed via leasing and short-term debts.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explained the techniques that were to be employed in the study. The chapter described the study design, study population, sample design, instrumentation, pilot test, reliability and validity of research tools, methods of data collection, data analytic methods, and lastly ethical consideration.

3.2 Research Design of Study

Miravittles et al. (2018) defined study design as the conceptual framework within which a study is undertaken, and it serves as the blueprints for the collection of data, their measurement, and their evaluation. As a result, it is a set of circumstances for collecting and analyzing data in a way that is appropriate to the study objectives. Owing to the essence of the problem and the accessibility of data, a causal or explanatory research strategy was adopted. This is a design that depicts how a variable(s) affects other variable(s) and tries to describe why these changes occur in statistical terms. Whenever researchers wish to see how variations in a variable affect changes in another variable, they use this method as indicated by Khan et al., 2018. Explanatory research aims to clarify instead of merely describe the events under investigation. In order to make causal inferences, this approach does not entail manipulating the predictor variables (Morri & Parri, 2017).

When some crucial evidence about the survey's phenomena is known, an explanatory design is preferable (Morri & Parri, 2017). In most circumstances, such as in this

research, it relies on quantitative data. Thurania (2014) used this approach to research the association between financial structure and the profitability of listed firms in Kenya.

Explanatory design was preferred since the study sought to establish how a unit change by the independent variables changes levels of profitability. The quantitative nature of data collected for the study also matched with use of the research design.

3.3 Target Population

A study population refers to a group/set of individuals, occurrences, or things that share related characteristics and meet given criteria (Mugenda & Mugenda, 2003). Kenya had eleven domestic commercial airlines that had received AFRAA approval between 2012 and 2021, which comprised the study's target group.

The target population of this research work comprised the eleven, (11) operational domestic commercial airlines in Kenya as recorded by the African Airlines Association (AFRAA) from the year 2012 to 2021 (see appendix III).

According to Alfaro-Saizet al. (2019), a census method should be used if the researcher will have an exhaustive analysis of all units/elements that make up the target population. A census of all the 11 domestic commercial airlines in Kenya was conducted in this study. This method was preferred since the target population is small and well manageable. Further, according to Micholson (2019), this method increases the validity of collected data by eliminating sampling and estimation errors.

3.4 Data Collection Instrument

Over the ten-year period, i.e. from 2012 to 2021, secondary data of all the variables under consideration in this study was obtained from the airlines' audited financial

statements posted on their websites and other official government websites and sources. The secondary data collection sheet, (Appendix II) was used as the instrument to acquire the data. The instrument assisted in the collection of accounting records required to construct profitability, i.e. net profit margin measures. Data on financial structure, i.e. share capital finance, lease finance, debt finance and retained earning finance, of the domestic commercial airlines was gathered as well.

Pretesting is a preliminary assessment of the interviewing guide to determine its practicality before moving forward with the research study. The study's data collection instrument is improved by piloting it before its implementation, and it ensures that participants comprehend the questions (Hughes & Sharrock, 2016). The pilot testing involved 10% of the sample size; and therefore data from one of the 11 domestic commercial airlines was acquired from their accounting offices. This was in conformity with the explanation of the 10 percent acquired from (Behi & Nolan, 2014) who stated that a pilot testing must be undertaken with a population size ranging of 1% to 10% of the study population.

3.5 Data Analysis and Presentation

The collected data will be updated for consistency and completeness before being processed. Descriptive analysis will be used to examine quantitative data. The researcher utilized descriptive statistical tool known as STATA program to analyze the data. Tables & charts were used to report and present the results. To summarize responses for future study and comparison, figures and tables were employed. The study used the following linear regression model to measure the strength of the association among the variables:

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

Where; Y= profitability, measured by Net Profit Margin

α - Is a constant

β_{1-4} – Are the regression coefficients for the predictor variables.

X1= Share capital finance, X2 = Lease finance, X3 = debt finance, X4 = retained earnings, and ϵ - Error term

3.5.1 Hypothesis Testing

Multiple linear regression (MLR) in the context of an empirical model was used to assess if or not the (the null hypotheses) specified in this analysis were true/false. Schindler and Cooper (2009) suggested that MLR attempts to assess whether or not the hypothesis is supported statistically. The financial structure and profitability relationship was calculated by examining the p-value against a 95 percent confidence level. Where the significance value of the beta value is not more than 0.05, the null hypothesis was rejected, but where the significance value is greater than 0.05, the null hypothesis was not rejected.

3.5.2 Operationalization of Study Variables

This section used table 3.1 to indicate how each of the study variables are calculated, either in terms of a ratio or a percentage. It shows the elements that are easily extracted from the financial statements used to calculate and determine and how each variable was measured, and arrived at from the collected data. The study adopted the measures since various previous studies have validated them.

Table 3. 1*Operationalization of study variables*

Variable	Operationalization	Formula	Scale
Dependent variable			
Profitability	Net profit margin	$\frac{\text{Net profit}}{\text{Total revenue}} \times 100$	Percentage
Independent variables			
Lease finance	Air lease current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$	Ratio
Share capital finance	Shareholder equity ratio	$\frac{\text{Shareholder equity}}{\text{Total assets}}$	Ratio
Debt finance	Debt ratio	$\frac{\text{Debt Value}}{\text{Total assets}}$	Ratio
Retained earnings	Retained earnings ratio	$\frac{\text{Net income} - \text{Dividend Issued}}{\text{Net income}}$	Ratio

3.6 Diagnostics Tests

The research used a variety of diagnostic tests to ensure that regression analysis assumptions were not violated, and to determine which models should be investigated if they were (Assaf & Tsionas, 2020). Pre-estimation and post-estimation tests were thus performed prior to running a regression model. The tests of Normality, multicollinearity, heteroscedasticity, and linearity were the diagnostic tests that were performed in this study. The next sections go over each of them individually.

3.6.1 Normality Test

This study used the normality test to establish if the data was followed a normal and regular distribution curve and was well modeled. This test was used by Kan and Zhou (2017) to indicate by how far the data deviated from the Gaussian distribution, and showing if data was under a normal distribution. The researcher preferred the Shipiro-Wilk test since it's the most powerful and accurate normalcy test.

This study tested the research hypotheses at 5% level of significance. The decision rule to accept or reject the null hypotheses was to reject if p-value from analysis was less than 0.05, otherwise not to reject. The dependent variable of this study must follow a normal distribution since the researcher used a multi-variate regression model. The null hypothesis tested was that data was normally distributed.

3.6.2 Test of Multicollinearity

The Multicollinearity test was used to see if one or more of the variables of interest is or are substantially related with one or more of the other predictor variables. The study applied the variance inflation factor denoted as VIF to indicate the magnitude of variance between variables, as well as show how much of this variance was caused by linear-dependence with other variables. Drawing from a study done by Manrquez (2021), if the VIF analysis results were greater than 10, then there existed a possibility of multicollinearity problem for the study variables.

3.6.3 Test for Linearity

Linearity presupposes that the predictor variables and the criterion variable have a straight-line connection (Manrquez, 2021). A scatter plot of all the independent

variables versus the outcome variable was used to see if there is a straight-line association between variables.

3.6.4 Testing for Heteroscedasticity

Heteroscedasticity is defined as the disturbances as a results of variances among observational variances that are not continuous. Heteroscedasticity can be seen in a wide range of applications, leading in inefficient evaluation results in both cross-section and time-series data (Manriquez, 2021). As according Kan and Zhou (2017), there are two ways to deal with heteroscedasticity: one is to employ heteroscedasticity-robust normal mistakes, and the other is to utilize weighted least squares. Nevertheless, the robust standard errors technique of heteroscedasticity is the most popular way. If heteroscedasticity is detected, this study will choose the most common heteroscedasticity-resistant errors to handle the problem.

3.6.5 Stationarity Testing

In order to determine if a panel data was stationary or not, i.e. non-stationary, this study applied the unit root test. The researcher carried out the Levin-Lin-Chu unit-root test in order to detect stationarity of data panels. The null hypothesis used herein was that data panels contained unit roots, or else are non-stationary, while the alternative hypothesis was that data panels contained not unit roots, or else are stationary.

3.6.6 Model Specification Test – Hausman Test

A variable with a fixed effect is described as one that their effect on profitability will change over time, but its fixed across the airlines, while a variable having the contrary effect is considered to have a random effect. This study applied these assumptions in

order to get the appropriate model between fixed effect model and random effect model. A fixed model assumed there is homogeneity of estimates from the firms, and sum of error terms is equal to zero. On the contrary, the random effect model assumed a random variation of variables across entities. To support this, a study undertaken by Kan and Zhou (2017) concluded that for random effect model, the sum of error terms from all firms was not equal to zero. So as to choose which model to adapt, a Hausman test was performed. This test used the null hypothesis that the model to be adopted was the random effect model. The test results which show the p-value, a chi-square statistic, to be less than 0.05 should lead rejection of the null hypothesis, and hence conclusion that the preferred model is the fixed effect model for such a case.

3.7 Ethical Consideration

Before heading to the field to gather data, the researcher needed clearance from the NACOSTI. When it comes to reporting the study's findings, the researcher made sure that the study reported appropriately and all figures reported reflected what was discovered after a thorough review of all the data.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

The chapter covers the study findings that were used to determine the link between the financial structure components and profitability of Kenyan domestic commercial airlines. Data used in this study was obtained by utilizing a data collection sheet (Appendix I) and evaluated and analyzed to generate outcome presented in various tables. The descriptive statistics used in the analysis comprised the frequency, maximum, minimum, standard deviation and mean. The study made use of the diagnostic tests to see whether the variables qualified for further analysis. Panel multiple regression analysis was used in testing the overall implication and relationship of the predictor variables to and with the response variable.

4.2 Descriptive Data Analysis

This section of the study focused on descriptive quantitative analysis of the acquired and recorded data for each of the independent variable. It reported on the mean values, standard deviations, minimum statistic and maximum statistic of each respective independent variable.

Table 4.1*Descriptive Data Analysis Table*

Variables	No. of Observations	Mean value	Std. Dev	Minimum value	Maximum value
Lease finance	110	0.290	0.027	0.227	0.335
Share capital finance	110	0.318	0.049	0.229	0.451
Retained earnings	110	0.369	0.038	-0.282	0.446
Debt finance	110	0.498	0.087	0.332	0.669
Net profit margin	110	0.423	4.382	-10.257	0.603

Research Data Output (2023)

From above table 4.1, the domestic commercial airlines' NPM was relatively low between 2012 and 2021. The minimal net profit margin was recorded as -10.257, which indicated that the commercial carriers incurred hefty and heavy financial losses throughout the ten-year study period. Profitability greatly varied across the study period as shown by the relatively high standard deviation of the NPM.

The log of total amount of lease finance used was found to be 0.290, and the maximum was 0.335. The log value indicated the overall average usage of lease finance. This indicated that during the period of study, lease finance was averagely sought by the domestic commercial airlines as a source of financing their operations as compared to other variables. Lease finance was thought to fluctuate very little in its use as shown by the relatively low standard deviation. In 2003, Letolou concluded that lease finance is

commonly used by firms in order to reduce potential financial crisis and illiquidity caused by cash shortage.

The log of total amount of share capital finance used was found to be 0.318, and the maximum was 0.451. The log value indicated the overall average usage of share capital finance. This indicated that during the period of study, share capital finance was frequently sought by the domestic commercial airlines as a source of financing their operations. Share capital finance was thought to fluctuate very little in its use as shown by the relatively low standard deviation.

The log of total amount of debt finance used was found to be 0.498, and the maximum was 0.669. The log value indicated the overall average usage of debt finance. This indicated that during the period of study, debt finance was the most frequently sought and preferred source of finance by the domestic commercial airlines for funding their operations. Debt finance was thought to fluctuate very little in its use during period of study as shown by the relatively low standard deviation.

The log of total amount of retained earnings used was found to be 0.369, and the maximum was 0.282. The log value indicated the overall average usage of share capital finance. This indicated that during the period of study, retained earnings were the least sought and preferred source of finance by the domestic commercial airlines as a source of financing their operations. This was due to the periods low profit margins, which resulted to constrained access and use of retained earnings. This firmly supported the study done by Dinayak in 2014 which concluded that retention ratio fluctuates greatly between airlines due to volatility of the industry.

4.3 Study Diagnostic Tests of Data

This study performed various diagnostic test on the secondary data collected in order to ensure conformity to the assumptions of multiple linear regression data analysis and testing of study hypotheses. The importance of these tests carried out was to ensure that results from data analysis were valid, realistic and efficient to achieve the purpose of the study.

4.3.1 Test of Normal Distribution of Variables' Data

This study made use of the tests of normality to verify if the data observed was of a normal distribution in nature. The Shapiro-Wilk normality test was used to examine if the variable values were normally distributed. The following hypotheses were used to carry out the test.

H₀ implies that the research data values are regularly and normally distributed, whilst **H₁** suggests that the research data values are unbalanced. The results of the analysis of the tests shown in Table 4.2. The normality test results are in Table 4.2.

Table 4.2*Normality Test results*

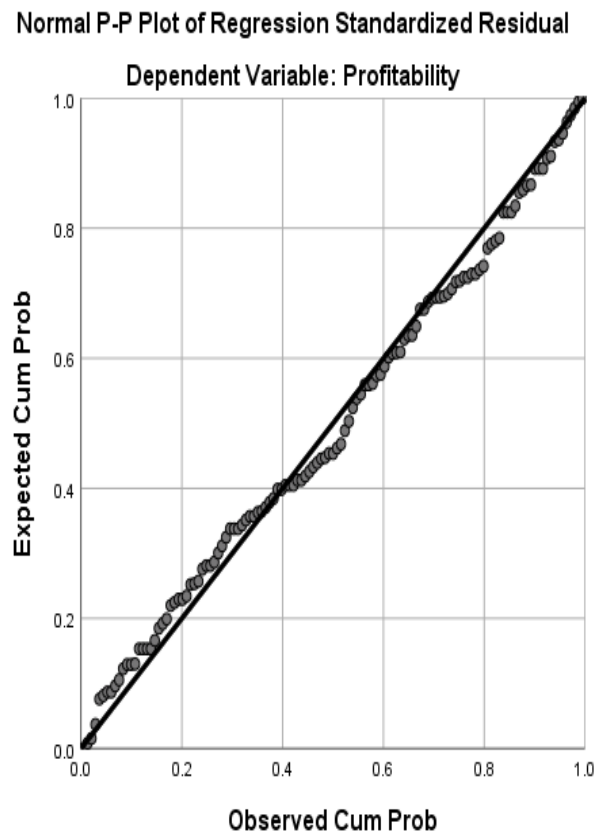
Variable	Obs	W	V	Z	Prob>z
Net profit margin	110	0.97719	1.039	0.081	0.46777
Share capital finance	110	0.94753	2.390	1.854	0.06190
Lease finance	110	0.96992	1.370	0.670	0.25146
Debt finance	110	0.97891	0.960	-0.086	0.53421
Retained earnings	110	0.95841	1.894	1.359	0.08710

Research Data Output (2023)

Because the outcome variable's p-value was larger than 0.05, the research failed to reject the null hypotheses and ascertained that the distribution was normal. This meant that the measured research data had a normal distribution, allowing for a linear regression analysis.

Figure 4. 1

Normality Tests Results



4.3.2 Test of Multi-collinearity between Variables

This study carried out a multicollinearity test so as to confirm that regression analysis carried out was not influenced by multicollinearity at a significant level. The variance inflation factor (VIF) was used, where its mean value was required to be below 5.

Table 4. 3***Test of Multicollinearity***

Variables	VIF	1/VIF
Share capital finance	1.47	0.9662
Lease finance	1.36	0.8084
Debt finance	1.32	0.7514
Retained earnings	1.05	0.9422
Net profit margin	1.54	0.9304
Mean VIF	1.27	

Research Data Output (2023)

The mean VIF=1.27 in Table 4.3 was below five, inferring absence of multicollinearity (Ringle et al., 2015). The tolerance factor (values of 1/VIF) for every variable having less than one confirmed the preceding observation. This was consistent with one of the classical linear model (CLM) requirements which states that there should be no multicollinearity in the predictor variables for a regression analysis to be done.

4.3.3 Stationarity Test Results

The unit root test was conducted on all the study variables in the investigation to assess if the panel data was stationary (Granger & Newbold, 1974). Table 4.4 displays the results of the root test for every variable of the study.

Table 4.4***Stationarity Tests Results***

ADF regressions: 1 lag

LR variance: Bartlett kernel, 6.00 lags average (chosen by LLC)

		Statistic	p-value
Share capital finance	Unadjusted t	0.0166	0.0066
	Adjusted t*	0.0145	0.0058
Lease finance	Unadjusted t	1.1751	0.0100
	Adjusted t*	1.1185	0.0183
Debt finance	Unadjusted t	0.1252	0.0298
	Adjusted t*	0.1182	0.0270
Retained earnings	Unadjusted t	-0.5067	0.0062
	Adjusted t*	-0.4848	0.0139
Net profit margin	Unadjusted t	-2.3214	0.0101
	Adjusted t*	-2.2140	0.0134

Research Data Output (2023)

This study tested the null hypothesis that panel data was not stationary, and decision rule was to reject this hypothesis if t statistic was less than 0.05, ($t < 0.05$). Therefore, the analysis rejected the null hypothesis and came to the conclusion that the panel data was stationary.

4.3.4 Heteroscedasticity Test

According to Gujarati, (2003), a situation in data analysis where the variance of the residual term changes with changes in the independent variables is known as heteroscedasticity. Therefore, the error term variance is assumed to be constant for a conventional linear regression model. This study applied the Cook-Welsberg technique, also known as Breusch-Pagan technique to test for heteroscedasticity as shown by table 4.5

Table 4.5

Panel data Heteroscedasticity Test results, (Breusch-Pagan/Cook-Welsberg test)

Fixed effects	Chi²	Prob> Chi²
Panel model 1 (Net profit margin)	49.97	0.0000

H0: Constant error variance (homoscedasticity)

Research Data Output (2023)

The findings from our study model's test resulted to a chi-square distribution with respective significance values, with both ninety (90) and ninety-five (95) percent levels of confidence. Deducing from what Wiggins and Poi (2001) indicated, the null hypothesis concerning constant variance was rejected.

4.3.5 Results of Serial Correlation Test

In order to indicate any autocorrelation between panel data, this study applied the Wooldridge test technique. The results are shown in table 4.6 below.

Table 4.6

Results Serial Correlation Test using Wooldridge Test

Study model	F-statistic	p-value
Panel Model 1	22.630	0.0000
Panel Model 2	10.899	0.0021

Research Data Output (2023)

Results from above table 4.6 indicated that F-statistic was significant at a level of confidence of 5%. The results gave the F-statistic with (1,38) degrees of freedom.

4.3.6 Hausman Test

To select the appropriate model of the profitability of the domestic commercial airlines in Kenya, this research used the Hausman test, which compared the RE model to the FE model. The hypothesis [Ho] stated that the coefficient variability is not structured (Greene, 2012). As a consequence of the test, significant values alpha below 0.05 at the 5 percent level indicated that the FE model was adequate, as shown in Table 4.7.

Table 4. 6*The Hausman Test for Model Effects Estimation*

Financial performance measures	Variables	Prob>chi²	Model
Profitability	Share capital finance, Lease finance , debt finance , Retained earnings	0.2541	RE
Profitability	Share capital finance	0.1441	RE
Profitability	Lease finance	0.6484	RE
Profitability	Debt finance	0.0389	FE
Profitability	Retained earnings	0.0707	RE

The test findings from above table 4.7 demonstrate statistically insignificant and significant chi-square statistics at the five percent significance level. Equations with significance values larger than 0.05 resulted in the rejection of the hypothesis [Ho] that FE estimate was suitable for the equations at the five percent level of significance; and as a response, the panel models for random effects were calculated (Greene, 2012). Significance values less than 0.05, on the other hand, imply that FE estimation was adequate for the equations at five percent level of significance.

4.4 Data Correlation Analysis

Table 4. 7

Pearson Correlation Matrix for Independent and Dependent Variables

		SCF	LF	DF	RE	PROF
SCF	R	1				
	Sig value					
LF	R	.691**	1			
	Sig value	.000				
DF	R	.671**	.441**	1		
	Sig value	.000	.000			
RE	R	.691**	.586**	.575**	1	
	Sig value	.000	.000	.000		
PROF	R	0.4226**	0.4520**	0.5231**	0.4905**	1
	Sig value	.000	.001	.000	.001	

** . Level of significance, 0.01, 2 tailed correlation test.

Keywords: **SCF** = Share Capital Finance, **LF** = Lease Finance, **DF** = Debt Financing, **RE** = Retained Earnings and **Prof** = Profitability

Pearson's simple correlation analysis was used in the study to investigate how the variables under consideration were related. A correlation coefficient quantifies the degree to which two variables tend to vary in tandem; it reveals the type and intensity of the link, or correlation between the variables under investigation. The [r] coefficient represents the direction and the strength of the relationship between the variables; and

it runs from negative 1 to positive 1. It was used to indicate how two variables are linearly associated with each other. Both the strength, direction and relationship between two variables is describes by the coefficient which ranges between negative 1 to positive 1. It also indicates if the variables have a linear relationship.

The relationship between share capital finance and financial profitability was seen as moderate, positive and significant from the results of data analysis herein. This indicated that an increase in the amount of share capital used by the firms resulted to an increase in profits reported during the study period of 2012 and 2021. This study observation concurred with a study done by Ahmed in 2012 that found out that share capital finance and profitability were significantly related. Similarly, financial performance measured by ROA was found to have a positive and significant relationship with share capital finance by a study done by Mwangi et al. (2014).

This study further found a positive and significant relationship between financial profitability and lease finance. This indicated that during the period of study, i.e. 2012 to 2021, an increase in use of lease finance to support growth and purchase of assets by domestic commercial airlines resulted to an increase in the reported profits of the firms. This results varied with the study done by Kubai in 2016 who found a negative relationship between short term debt and net profit margin. Similarly, another study by Anthony and Chinaemerem found a statistically significant but negative relationship between profitability and short term asset financing.

The results of this study further found that amount of debt finance used by domestic commercial airlines had a positive and significant relationship with amount of profits earned. This pointed out that during the period of study, i.e. 2012 and 2021, profits earned increased as use of debt finance was increased. This results agreed with those

from a study done by Samuel (2016) that indicated debt ratio influences profitability of banks significantly.

Lastly, this study established a positive and significant kind of a relationship between amounts of retained earnings used as a source of finance by domestic commercial airlines to the amount of profits reported by the respective firms. This implied that during the period between 2012 and 2021, an increase in amount of retained earnings used by these firms resulted to an increase in profits reported. This study confirmed the findings and conclusions made by Ishamail and Mwangi, (2014) that there exists a positive and significant relationship between equity finance, (both internal and external) and financial profitability. Similarly, a study by Marieta in 2012 found a positive and significant correlation between a firm's profitability and use of internal finance, i.e. retained earnings.

4.4.1 Profitability and Share Capital Finance

To assess the association of share capital financing and the profitability, correlation statistic was used.

Table 4.8

Profitability and Share Capital Finance

	Profitability
Share capital finance	0.4226
Sig	0.0142
N	110

Research Data Output (2023)

The outcome confirmed there was a moderate, significant and positive relationship between share capital financing and the domestic commercial airline firms' profitability. This goes on to show that during the study period 2012 to 2021, an increase in share capital financing led to increase in profitability of the domestic commercial airlines.

The results are consistent with those of Ahmad et al. (2012), who discovered that share capital financing (TD) was significantly associated to profitability. The results, nevertheless, differ with those of Mwangi et al. (2014), who confirmed a positive association between share capital finance and performance as evaluated by return on asset (ROA) and operating profit margin.

4.4.2 Profitability and Lease Finance

To assess the association of lease financing and the profitability, correlation statistic was used.

Table 4.9

Profitability and Lease Finance

	Profitability
Lease finance	0.4520
Sig	0.0013
N	110

Research Data Output (2023)

The results indicated that there was a significant and positive association between profitability of domestic commercial airlines and lease financing. This pointed out that during the period 2012 through 2021 an improvement in lease finance improved companies' profitability. The outcome differs from those of Kufai (2017) and Chinaemerem and Anthony (2012), who confirmed that lease financing and profitability (Net Profit Margin) were inversely correlated.

4.4.3 Profitability and Debt Finance

To assess the association of debt finance and the profitability, correlation statistic was used.

Table 4.10

Profitability and Debt Finance

	Profitability
Debt finance	0.5231
Sig	0.0001
N	110

Research Data Output (2023)

The results indicated that there was a significant, positive correlation between debt finance and domestic commercial airline profitability meaning that in 2012 through 2021 an increment in debt finance improved the profitability of the companies under investigation. The results support Samuel's (2016) findings that debt ratio has a beneficial effect on profitability. The study found that debt financing had a favourable and considerable impact on profitability. The findings concur with the study of Raude, et al. (2015) which revealed a substantial association between debt finance funding and financial performance. According to the findings of Kariuki et al. (2017), equity funding has a favourable link with the business performance of SMEs.

4.4.4 Profitability and Retained Earnings

To assess the association of retained earnings and profitability, correlation statistic was used.

Table 4.11

Profitability and Retained Earnings

	Profitability
Retained earnings	0.4905
Sig	0.004
N	110

Source: Research Data (2023)

The results indicated that retained earnings and profitability of the companies under investigation was linearly correlated indicating that in 2012 through 2021, and an increase in the amounts of retained earnings by the domestic commercial airlines consequently improved their profitability.

The outcome is consistent with those of Ishmail and Maina (2014), who found a favorable association between equity financing (external and internal) and performance financially. Retained financing had a negative correlation with the performance of firms under study. Marietta (2012) discovered a substantial positive link between internal and retained profits finance and business profitability. However, the findings differ with those of Njeru et al. (2018), who found that share capital [ordinary] had a negative but negligible influence on profitability at the 5 percent significant level.

4.5 Regression Data analysis

This study tested all the null hypotheses by performing panel regression analysis of each independent variable against the dependent variable, and later all independent variables against the dependent variable.

4.5.1 Lease Finance and Profitability

This study aimed at testing the below null hypothesis:

H₀: There is no a significant relationship between amount of lease finance used and profitability levels of Domestic commercial airlines in Kenya

Below is table 4.13 showing the results of analysis between the two variables.

Table 4.13

Lease Finance and Profitability

	Coefficient	Std. Err.	z	P> z 	Model
Lease Finance	0.4066	0.1621	2.51	0.012	Random Effect
Constant	0.1743	0.0528	3.30	0.001	
Statistics					
Wald chi ² (1)	6.29				
P-value	0.0121				
R-Squared	0.3985				

From above data analysis results presented by table 4.13, the covariance coefficient, (r), was 0.3985, which was supposed to show the direction and strength of relationship between the two variables, hence indicated that leasing finance variable predicted 39.85 percent of the difference in profitability in Kenyan domestic commercial airlines. Because the P-value was less than 0.05, it meant that the model was fit for the dependent variable prediction. Furthermore, Lastly, the coefficient of correction between the two study variables was not zero as indicated by the Wald Chi² value above 0.05.

The findings also confirmed that, when all other study variables remained unchanged/constant, an increase by a single unit increase in lease finance resulted in a 0.4066-unit increase in profitability. Because the value of significance was below 0.05 from these results, the research rejected the hypotheses [Ho] and confirmed that lease finance capital had a considerable influence on the profitability of Kenyan domestic commercial airlines. The following linear model was developed based on the observations in Table 4.13.

$$\text{Profitability} = 0.1743 + 0.4066 \text{ Lease finance}$$

4.5.2 Profitability and Share capital finance

This study aimed at testing the below null hypothesis:

Ho: Share capital finance does not have a significant relationship with profitability of Domestic commercial airlines in Kenya

Table 4.14*Share Capital Finance and Profitability*

	Coefficient	Std. Err.	z	P> z 	Model
Share Capital Finance	0.3778	0.1621	2.33	0.020	Random Effect
Constant	0.1825	0.0533	3.42	0.001	
Statistics					
Wald chi ² (1)	5.4300				
P-value	0.0198				
R-Squared	0.3725				

From above data analysis results presented by table 4.14, the covariance coefficient, (r), was 0.3725, which was supposed to show the direction and strength of relationship between the two variables, hence indicated that Share capital finance accounted for 37.25 percent of the variation in profitability in Kenyan domestic commercial airlines. Because the value of significance was below the 0.05, it suggested that the dependent variable could be perfectly predicted using the model. Lastly, the coefficient of correction between the two study variables was not zero as indicated by the Wald Chi² value above 0.05.

The findings also confirmed that, when the other variables remained unchanged, a single unit increment in Share capital finance resulted in a 0.3778-unit increment in profitability of domestic commercial airlines in Kenya. As a result, the analysis rejected the hypotheses [Ho] and confirmed that share capital finance had a considerable influence on the profitability of Kenyan domestic commercial airlines. The following model was developed based on the observations in Table 4.14.

$$\text{Profitability} = 0.1825 + 0.3778\text{SCF}$$

Where SCF = Share capital finance

4.5.3 Debt finance and Profitability

This study aimed at testing the below null hypothesis:

Ho: Debt finance capital does not have a significant relationship with profitability of Domestic commercial airlines in Kenya.

Table 4.15

Debt Finance and Profitability

	Coefficient	Std. Err.	z	P> z 	Model
Debt Finance	0.3758	0.1649	2.28	0.023	Fixed Effect
Constant	0.1832	0.0541	3.39	0.001	
Statistics					
Wald chi ² (1)	5.2000				
P-value	0.0226				
R-Squared	0.4086				

From above data analysis results presented by table 4.16, the covariance coefficient, (r), was 0.4086, which was supposed to show the direction and strength of relationship between the two variables, hence indicated that debt finance capital accounted for 40.86 percent of the variation in profitability in Kenyan domestic commercial airlines. Because P-value was less than 0.05, it suggested that the dependent variable could be perfectly predicted using the model. Lastly, the coefficient of correction between the two study variables was not zero as indicated by the Wald Chi² value above 0.05.

The outcome also revealed that, when the other three variables remained unchanged, a single unit increment in debt finance resulted in a 0.3758-unit increment in profitability. Because the sig. value was below 0.05, it was concluded the relationship was significant. As a result, the research rejected the hypothesis [Ho] and demonstrated that debt finance capital had a considerable influence on the profitability of Kenyan domestic commercial airlines. The following model was developed based on the observations in Table 4.15.

$$\text{Profitability} = 0.1832 + 0.3758 \text{ DFC}$$

Where, DCF = Debt finance capital

4.5.4 Retained earnings and Profitability

The research sought to test the following hypothesis:

Ho: Retained earnings capital does not have a significant relationship with profitability of Domestic commercial airlines in Kenya.

Table 4.16***Retained earnings and Profitability***

	Coefficient	Std. Err.	z	P> z 	Model
Retained earnings	.4458	.1491	2.99	0.003	Random Effect
Constant	.1613	.0491	3.29	0.001	
Statistics					
Wald chi2(1)	8.94				
P-value	0.0028				
R-Squared	0.4063				

From above data analysis results presented by table 4.16, the covariance coefficient, (r), was 0.4063, which was supposed to show the direction and strength of relationship between the two variables, hence indicated that retained earnings capital accounted for 40.63 percent of the variation in profitability in Kenyan domestic commercial airlines. Because P-value was less than 0.05, it suggested that the dependent variable could be perfectly predicted using the model. Lastly, the coefficient of correction between the two study variables was not zero as indicated by the Wald Chi² value above 0.05.

The findings also confirmed that, when the other three study predictor variables remained unchanged, a single unit increment in retained profits resulted in a 0.4458 units' increment in profitability. Because the sig. value was below the 0.05, the association was therefore statistically significant. As a result, the research rejected the null hypothesis [Ho] and established that retained profits capital had a considerable effect on the profitability of the commercial airlines under investigation. The following model was developed based on the observations in Table 4.13.

$$\text{Profitability} = 0.1613 + 0.4458 \text{ Retained earnings}$$

4.5.5 Financial structure and Profitability

The study was aimed at determining the effect of financial structure components, i.e. share capital finance, lease finance, debt capital finance and retained earnings capital, on the profitability, i.e. Net Profit Margin, of domestic commercial airlines in Kenya. The outcome is tabulated below.

Table 4.17

Financial Structure and Profitability

Profitability	Coefficient	Std. Error	Z	P> z 	Model
Share capital finance	0.402	0.066	6.04	0.000	RE
Lease finance	0.737	0.227	3.24	0.001	
Debt finance	0.904	0.236	3.83	0.000	
Retained earnings	0.188	0.095	1.99	0.047	
-Cons	.244	.070	3.51	0.000	
Statistics	Model 1a				
Wald chi2(4)	10.30				
P-value	0.0357				
R-Squared	0.4032				

From above data analysis results presented by table 4.17, the covariance coefficient, (r), was 0.4032, which was supposed to show the direction and strength of relationship between the two variables, hence indicated that financial structure accounted for 40.32 percent of the variations in profitability in Kenyan domestic commercial airlines. Because P-value was less than 0.05, it suggested that the model was fit in predicting the dependent variable. Lastly, the coefficient of correction between the two study variables was not zero as indicated by the Wald Chi² value above 0.05.

Holding all the variables under study constant, the results showed that profitability would be 0.244, with a unit increase in share capital finance resulting in a 0.402-unit increase in profitability. P-value was less than 0.05, suggesting that the link was therefore of statistical significance. A unit increment in lease finance corresponded to a 0.737 unit rise in profitability. P-value for the same was less than 0.05, showing that the association was therefore significant statistically. A unit increment in debt finance resulted in a 0.904 rise in profitability, and the P-value was less than 0.05, which indicated that the association was thus significant. Finally, a single unit upturn in retained earnings led to 0.188 upturn in profitability, and since the significance value was below the 0.05, it confirmed that the association between the variables is significance. As a result, the resultant linear regression model showing the effect of financial structure on the profitability of domestic commercial airlines was expressed as follows:

$$\text{Profitability} = 0.244 + 0.402 \text{ SCF} + 0.737 \text{ LF} + 0.904 \text{ DF} + 0.188 \text{ RE}$$

Where; DF = Debt Finance; LF = Lease Financing; RE = Retained Earnings; SCF = Share Capital Finance

Using our estimation analysis model, these findings were represented as follows

$$Y = 0.244 + 0.402X_1 + 0.737X_2 + 0.904X_3 + 0.188X_4$$

4.6 Results of Hypotheses Testing

4.6.1 Profitability and Lease Finance

The first hypothesis to be tested was:

H₀₁: There exists no significant and positive relationship between profitability reported and amounts of Lease finance used by domestic commercial airlines in Kenya

This study used panel regression analysis method to test this hypothesis, and the p-value to determine and respond to it. The decision criterion for rejecting the null hypothesis was to do so if the p-value test result was less than 0.05. The p-value results from panel regression analysis was 0.0121, which is less than 0.05. Therefore, the null hypothesis that there is no positive and significant relationship between reported profitability and amounts of lease finance used by domestic commercial airlines was rejected. This led the researcher to conclude that the alternative hypothesis was true, hence there exists a positive and significant relationship between reported profitability and amount of lease finance used by domestic commercial airlines in Kenya. This study disagreed with the one done by Kwame in 2007 which conclude that net profit margin and lease finance capital had a negative and insignificant relationship. The results of this study also varied with those of a study done in Egypt by Ebaid in 2019, which indicated an insignificant relationship between lease financing and net profit margin. However, it agreed with the study done Abdul in 2012 that showed a positive and significant relationship between lease finance and profits reported among firms in Pakistan. Similarly, a positive influence of lease finance on ROA and net profit margin was reported by a study done by Kanwal (2018).

4.6.2 Profitability and Share Capital Finance

The second hypothesis to be tested was:

H₀₂: There exists no significant and positive relationship between profitability reported and amounts of share capital finance used by domestic commercial airlines in Kenya.

This study used panel regression analysis method to test this hypothesis, and the p-value to determine and respond to it. The decision criterion for rejecting the null hypothesis was to do so if the p-value test result was less than 0.05. The p-value results from panel regression analysis was 0.0198, which is less than 0.05. Therefore, the null hypothesis that there is no positive and significant relationship between reported profitability and amounts of share capital finance used by domestic commercial airlines was rejected. This led the researcher to conclude that the alternative hypothesis was true, hence there exists a positive and significant relationship between reported profitability and amount of share capital finance used by domestic commercial airlines in Kenya. This study agreed with the one done by Niresh and Velnampy (2012) which established that profitability of SMEs measured by ROA, is positively and significantly influenced by share capital finance.

4.6.3 Profitability and Debt Finance

The third hypothesis to be tested was:

H₀₃: There exists no significant and positive relationship between profitability reported and amounts of debt finance used by domestic commercial airlines in Kenya

This study used panel regression analysis method to test this hypothesis, and the p-value to determine and respond to it. The decision criterion for rejecting the null hypothesis was to do so if the p-value test result was less than 0.05. The p-value results from panel regression analysis was 0.0226, which is less than 0.05. Therefore, the null hypothesis that there is no positive and significant relationship between reported profitability and amounts of debt finance used by domestic commercial airlines was rejected. This led the researcher to conclude that the alternative hypothesis was true, hence there exists a

positive and significant relationship between reported profitability and amount of debt finance used by domestic commercial airlines in Kenya. This study agreed with the one done by Muriuki and Baimwera, (2014) which established that profitability of SACCOs in Kenya is positively and significantly influenced by debt finance. On the contrary, a study carried out by Muigai in 2016 concluded that debt finance negatively and significantly affected profitability of companies.

4.6.4 Profitability and Retained Earnings

The fourth hypothesis to be tested was:

H₀₄: *There exists no significant and positive relationship between profitability reported and amounts of retained earnings used by domestic commercial airlines in Kenya*

This study used panel regression analysis method to test this hypothesis, and the p-value to determine and respond to it. The decision criterion for rejecting the null hypothesis was to do so if the p-value test result was less than 0.05. The p-value results from panel regression analysis was 0.0028, which is less than 0.05. Therefore, the null hypothesis that there is no positive and significant relationship between reported profitability and amounts of retained earnings used by domestic commercial airlines was rejected. This led the researcher to conclude that the alternative hypothesis was true, hence there exists a positive and significant relationship between reported profitability and amount of retained earnings used by domestic commercial airlines in Kenya. This study agreed with the one done by Peter and Timothy, (2012) which established that profitability is positively and significantly influenced by Retained earnings for companies listed in NSE.

Table 4.17

Summarized Hypotheses Testing Results

	Study Objectives	Study Hypotheses	Decision Rule applied	p- value result	Study Conclusions
1	To determine the relationship between profitability and share capital finance of domestic commercial airlines in Kenya	H₀₁: There is no positive and significant relationship between profitability reported and amount of share capital finance used by domestic commercial airlines in Kenya.	Reject H ₀₁ if p-value are less than 0.05	P value > 0.05	Resultant financial profitability reported had a positive and significant relationship with amount of share capital finance used by domestic commercial airlines in Kenya.
2	To determine the relationship between profitability and lease finance of domestic commercial airlines in Kenya	H₀₂: There is no positive and significant relationship between profitability reported and amount of lease finance used by domestic commercial airlines in Kenya.	Reject H ₀₁ if p-value are less than 0.05	P value > 0.05	Resultant financial profitability reported had a positive and significant relationship with amount of lease finance used by domestic commercial airlines in Kenya.
3	To determine the relationship between profitability and debt finance of domestic commercial airlines in Kenya	H₀₃: There is no positive and significant relationship between profitability reported and amount of debt finance used by domestic commercial airlines in Kenya	Reject H ₀₁ if p-value are less than 0.05	P value > 0.05	Resultant financial profitability reported had a positive and significant relationship with amount of debt finance used by domestic commercial airlines in Kenya.

4	To determine the relationship between profitability and retained earnings of domestic commercial airlines in Kenya	H₀₄: There is no positive and significant relationship between profitability reported and amounts of retained earnings used by domestic commercial airlines in Kenya	Reject H ₀₁ if p-value are less than 0.05	P value > 0.05	Resultant financial profitability reported had a positive and significant relationship with amount of retained earnings used by domestic commercial airlines in Kenya.
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CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS OF STUDY

5.1 Introduction

An overview of the findings, accompanied with the summary, conclusions and recommendations of this study have been presented in this chapter. Following that, it gives suggestions grounded on the same findings. It also recommends that more research should be conducted in light with the study's unique findings.

5.2 Summary of the Study

The study's purpose was to investigate the effects of financial structure variables, i.e. share capital finance, lease finance, debt capital finance and retained earnings, and the profitability of the commercial airlines within Kenyan jurisdictions. Specifically, the study aimed at establishing how and to which extent does lease finance capital, share capital finance, debt finance and retained earnings finance affect the profitability of the eleven domestic commercial airlines in Kenya.

A descriptive research design was adopted and the focus was on the 11 domestic commercial airlines in Kenya, and a census was used to allow all enterprises to participate in the study. Secondary data was collected through document inspection from the companies' recorded yearly audited financial statements on their respective websites & other official government websites and sources. Profitability was calculated using the net profit margin. The justification of using NPM as a measure of profitability was because it has less "noise" as compared to other measures of profitability like ROA and ROE. Additionally, NPM incorporates much of the factors that determine the profit & costs.

To establish the effect of share capital finance and local carriers' profitability, descriptive and inferential analysis were done. Descriptive analysis outcome depicted that 31.8 (Thirty-one point eight) percent of the financial structure comprised of the share capital finance. The correlation analysis outcome suggested that there was a positive association between share capital finance and domestic commercial airlines' profitability. The regression analysis outcome confirmed that share capital finance affected local carriers' profitability, and further explained that maintaining other study predictor variables unchanged/constant, a unit rise in share capital finance led to 0.3778 units rise in domestic commercial airlines' profitability. Since the significance value was less than 0.05, the study confirmed that there is a statistical significance in the relationship between the two variables.

Secondly, the study established the association between lease finance and domestic commercial airlines' profitability after descriptive and inferential analysis were done. Descriptive analysis outcome depicted that 29.0 (Twenty-nine) percent of the financial structure for the domestic commercial airlines' comprised of the lease finance. The correlation analysis outcome suggested there was a positive association between lease finance and airlines' profitability. The regression analysis outcome confirmed that lease finance affected local carriers' profitability, and further explained that maintaining other study predictor variables unchanged, a unit rise in lease finance led to 0.4066 units rise in local carriers' profitability. Lastly, since the significance value was less than 0.05, the study further confirmed that there is a statistical significance in the relationship between the two variables.

Thirdly, the study established an association between debt finance and local carriers' profitability when descriptive and inferential analysis of collected data were done. Descriptive analysis outcome depicted that 49.8 (Forty-nine point eight) percent of the financial structure of domestic commercial airlines was made up of debt finance component. The correlation analysis outcome suggested there was a positive association between debt finance and domestic commercial airlines' profitability. The regression analysis outcome confirmed that debt finance affected local couriers' profitability, further explain that maintaining other study predictor variables unchanged, a unit rise in debt finance led to 0.3758 units rise in domestic commercial airlines' profitability. The significance value was less than 0.05, thus confirming statistical significance in the relationship.

Fourthly, the study established the association between retained earnings and local carriers' profitability after descriptive and inferential analysis of data were done. Descriptive analysis outcome depicted that 36.9 (Thirty-six point nine) percent of the financial structure comprised of the retained earnings. The correlation analysis outcome suggested there was a positive association between retained earnings and domestic commercial airlines' profitability. The regression analysis outcome confirmed that retained earnings affected local carriers' profitability, and further explained that maintaining other study predictor variables unchanged, rise in retained earnings by a single unit led to 0.4458 units rise in local carriers' profitability, and since the significance value was less than 0.05, it confirmed a statistically significance relationship.

5.3 Conclusion of the Study

The study sought to fill the contextual, conceptual and methodological gaps that existed from previous studies that touched on financial structure and profitability. In conclusion, this study provided a unique perspective on financial structure concepts by looking at the aspects of share capital finance, lease finance, debt finance and retained earnings, as the main components of financial structure, that offered a new insight into the relationship between financial structure and profitability among domestic commercial airlines. The study was rooted in three theories namely, the Trade-off Theory of Capital Structure, Pecking Order Theory and Agency Theory, which provided a solid ground for developing a conceptual framework. These 3 theories laid the premises to discuss when, and to which extent should a firm source for its funds internally or externally while still aiming to maximize its profits. The study explored how to tradeoff between the holding costs of capital versus tax-shield benefits of debts so as to have an optimal-balanced financial structure. The study also discussed sourcing for investing funds following a hierarchical preference, as advocated by Pecking order model, with preference on internal sources.

After data modelling, the study confirmed that there was a significant relationship between independent variables with the dependent variable of the study. For Share capital finance ($\beta = 0.3778$; $P < 0.05$), there was a positive & significant relationship with profitability, same with lease finance ($\beta = 0.4066$; $P < 0.05$), similar to debt finance ($\beta = 0.3758$; $P < 0.05$), and lastly, retained earnings as shown by ($\beta = 0.4458$; $P < 0.05$). Multiple linear regression analysis results showed that there was a significant relationship between share capital finance ($\beta = 0.402$; $P < 0.05$), lease finance ($\beta = 0.737$; $P < 0.05$), debt finance ($\beta = 0.904$; $P < 0.05$), and retained earnings ($\beta = 0.244$;

$P < 0.05$) and profitability of domestic commercial airlines in Kenya. The study concluded that at bivariate level, retained earnings was the most significant variable among the four variables under study. However, at multivariate level, debt finance was the most significant variable among the four variables under study followed by lease finance, share capital finance and lastly retained earnings.

This study provided useful recommendations to both practitioners and scholars of finance, and especially in areas such as financial management, investment sources of finance, financial profitability of firms in terms of NPM, and optimal financial structure.

This study concluded that the three theories used as pillars of the study herein, that is, 'agent-principal problem' hypothesis, the pecking order of corporate finance and the trade-off theory of capital structure, have a great and significant mandate in determining the financial profitability of domestic commercial airlines. This conclusion confirms that this study tackled the research objectives adequately. It shows that this study addressed the conceptual, contextual & methodological gaps that existed from previous studies done about the area of study. Lastly, this study concluded that debt finance is an important element in financial structure of a firm, and any increase in usage level of debt finance resulted to an increase in profits measured and reported by domestic commercial airlines.

Also, the lease finance was established to be a key factor which has a significant bearing on the domestic commercial airlines' profitability and an upturn in lease finance leads to an increased profitability. Share capital finance was found to be key in determining the carriers' profitability and an increment in Share capital element increased the profitability of airlines under this study. Retained earnings was found to be a major

financing source and the same has a major effect on the domestic commercial airlines' profitability and a single unit increase in retained earnings increased their profitability.

5.4 Recommendations of the Study

In accordance with the findings and conclusions of this study, the following suggestions would be made;

In order for domestic commercial airlines in Kenya to improve, numerous components such as loan funding and equity financing must be increased. Recommendation based on findings include the necessity for enterprises to have rules that prioritize the determination and monitoring of their financial structure.

To be successful, domestic commercial airlines in Kenya need to have effective financial management, which aids in making decisions regarding funding mix and policy, as well as aligning sources of cash to objectives. The findings of this research suggest that owners in Kenyan domestic commercial airlines consider concerns linked to funding mix. Therefore, the research will assist policymakers in Kenya to remodel their firms by evaluating the influence of financial structure on profitability, as well as capital base, financial strength, and other legal needs of the airline firms.

According to the research's findings, organizations should utilize shareholders' cash as much as possible before borrowing in order to decrease the risks associated with debt financing. Risks such as massive interest payments on debt eroding earnings and onerous debt covenants are anticipated to contribute to financial trouble and eventual collapse of the companies. Firm management must thus be motivated to raise equity through listing on stock markets.

It is also advised that if enterprises must borrow from banking institutions, they must borrow in the short term first, rather than the long term, because it was determined that a large portion of firms' assets are funded through lease finance. To that aim, authorities are encouraged to design additional short-term financial instruments in order to provide a variety of options, which might even assist to cut borrowing costs due to increased competition. Moving forth, nevertheless, it is critical that the governments of EA nations be able to creatively manage the financial sector without compromising demand and supply dynamics in order to decrease the cost of share capital funding and increase its acceptance by enterprises. If this happens, the desire for long-term borrowing will be high since repayments will be stretched out across time, giving firms adequate time to generate returns on their borrowed money and even endure short-term economic shocks.

This study found that whereas financial structure funding sources explained business profitability separately, their combined influence was minimal. It is suggested that businesses mix finance sources that contribute favorably to profitability.

5.5 Study's Knowledge Contribution

This research and its findings and results will have additional knowledge-value to the current body of information on finance structure and profitability. The study's main contribution is that financial structure predicts profitability of a firm in the airline industry in Kenya. Preceding research has looked at the connections between finance structure and profitability. Nevertheless, the characteristics of the four independent factors employed in earlier investigations were varied, resulting in conflicting and unsatisfactory results.

5.6 Further Research Areas from this Study

It is envisaged that the outcomes of this research will add explicit value to the body of literature and serve as the foundation for future studies within the jurisdiction of the study. This study has recommended for more research are as noted below.

First, considering Kenya's local carriers as a study case, the present study examined the financing structure and its effect on profitability, as measured by Net Profit Margin. Future research should be conducted to determine if the similar aspects of lease capital, share capital, debt finance and retained earnings, as modes of financing a firm, are relevant to other businesses and/or industries, both locally and internationally.

Second, as mentioned, the focus of this research was limited to four independent factors. Further research is required to determine the effects caused on profitability from any additional component(s) not addressed by this area of study.

Furthermore, the study's scope was confined to a 10-year period, from 2012 to 2021. A comparative assessment of profitability before and during the COVID-19 epidemic is required. Further studies should be carried out to examine the effects of COVID-19 pandemic on the profitability of Domestic commercial airlines, as well as International Commercial airline industry.

Finally, investigations should be undertaken over a longer time range of more than ten years to obtain more accurate and definitive results.

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APPENDICES

Appendix I: Secondary Data Collection Sheet

Name of Airline:						
Financial indicator	201	201	201	2015	...	2021
	2	3	4			
Net profit						
Total revenue						
$\frac{\text{Net profit}}{\text{Total revenue}} \times 100$						
Net profit margin						
Current assets						
Current liabilities						
$\frac{\text{Current assets}}{\text{Current liabilities}}$						
Air lease current ratio						
Total shareholder equity						
Total asset						
$\frac{\text{Shareholder equity}}{\text{Total assets}}$						

Shareholder equity ratio						
Total debt						
Total assets						
$\frac{Debt}{Total\ assets}$						
Debt ratio						
Net income						
Dividend distributed						
$\frac{Net\ income - Dividend\ di}{Net\ income}$						
Retained earnings ratio						

Appendix II: List of Operational Domestic Commercial Airlines

1.	748 Air Services
2.	ALS Limited
3.	Astral Aviation Limited
4.	Bluebird Aviation Limited
5.	Dac Aviation (Ea) Limited
6.	East African Safari Air Express Limited
7.	Fly540 Air services Ltd
8.	Fly-SAX Aviation Ltd
9.	Kenya Airways Limited
10.	Safarilink Aviation Limited
11.	Skyward Express Limited

Source: Kenya Civil Aviation Authority (2021)

Appendix III: Data Input

Year	Company	SCF	Profitability/100	LF	DF	RE
2021	748 Air Services	0.292	0.275	0.352	0.566	0.468
2020	748 Air Services	0.327	0.266	0.381	0.594	0.603
2019	748 Air Services	0.323	0.232	0.39	0.618	0.385
2018	748 Air Services	0.319	0.257	0.391	0.586	0.418
2017	748 Air Services	0.328	0.229	0.393	0.514	0.391
2016	748 Air Services	0.318	0.248	0.379	0.56	0.321
2015	748 Air Services	0.279	0.273	0.356	0.539	0.413
2014	748 Air Services	0.307	0.312	0.369	0.573	0.45
2013	748 Air Services	0.287	0.321	0.354	0.498	0.511
2012	748 Air Services	0.3	0.314	0.396	0.607	0.533
2021	ALS Limited	0.298	0.314	0.385	0.574	0.553
2020	ALS Limited	0.327	0.254	0.41	0.669	0.445
2019	ALS Limited	0.265	0.281	0.39	0.514	0.456
2018	ALS Limited	0.335	0.266	0.446	0.549	0.309
2017	ALS Limited	0.316	0.273	0.416	0.554	0.376
2016	ALS Limited	0.289	0.32	0.393	0.543	0.381
2015	ALS Limited	0.308	0.368	0.413	0.521	0.436
2014	ALS Limited	0.3	0.29	0.409	0.468	0.427
2013	ALS Limited	0.301	0.315	0.428	0.544	0.492
2012	ALS Limited	0.259	0.286	0.303	0.351	0.527
2021	Astral Aviation Limited	0.249	0.297	0.282	0.332	0.5
2020	Astral Aviation Limited	0.271	0.354	0.302	0.338	0.418
2019	Astral Aviation Limited	0.298	0.285	0.354	0.5	0.533
2018	Astral Aviation Limited	0.285	0.336	0.354	0.507	0.475

2017	Astral Aviation Limited	0.234	0.339	0.302	0.371	0.541
2016	Astral Aviation Limited	0.286	0.369	0.344	0.469	0.376
2015	Astral Aviation Limited	0.285	0.305	0.362	0.428	0.349
2014	Astral Aviation Limited	0.227	0.325	0.317	0.374	0.293
2013	Astral Aviation Limited	0.302	0.356	0.373	0.539	0.321
2012	Astral Aviation Limited	0.278	0.365	0.355	0.427	0.287
2021	Bluebird Aviation Limited	0.304	0.357	0.385	0.502	0.257
2020	Bluebird Aviation Limited	0.324	0.284	0.425	0.542	0.545
2019	Bluebird Aviation Limited	0.243	0.322	0.322	0.403	0.352
2018	Bluebird Aviation Limited	0.308	0.303	0.391	0.459	0.513
2017	Bluebird Aviation Limited	0.259	0.306	0.334	0.391	0.474
2016	Bluebird Aviation Limited	0.289	0.32	0.35	0.407	0.395
2015	Bluebird Aviation Limited	0.24	0.354	0.302	0.356	0.481
2014	Bluebird Aviation Limited	0.302	0.355	0.375	0.494	0.533
2013	Bluebird Aviation Limited	0.317	0.333	0.396	0.632	0.408
2012	Bluebird Aviation Limited	0.307	0.355	0.404	0.566	0.438
2021	Dac Aviation (Ea) Limited	0.263	0.293	0.352	0.52	0.345
2020	Dac Aviation (Ea) Limited	0.288	0.311	0.375	0.573	0.367
2019	Dac Aviation (Ea) Limited	0.279	0.303	0.377	0.56	0.409

2018	Dac Aviation Limited (Ea)	0.295	0.368	0.395	0.468	0.317
2017	Dac Aviation Limited (Ea)	0.308	0.388	0.42	0.603	0.341
2016	Dac Aviation Limited (Ea)	0.233	0.451	0.327	0.385	0.384
2015	Dac Aviation Limited (Ea)	0.299	0.399	0.334	0.418	0.36
2014	Dac Aviation Limited (Ea)	0.287	0.451	0.337	0.391	0.413
2013	Dac Aviation Limited (Ea)	0.245	0.425	0.307	0.321	0.396
2012	Dac Aviation Limited (Ea)	0.251	0.424	0.367	0.413	0.411
2021	East African Safari Air Express Limited	0.245	0.454	0.363	0.45	0.356
2020	East African Safari Air Express Limited	0.266	0.424	0.37	0.511	0.415
2019	East African Safari Air Express Limited	0.271	0.397	0.378	0.533	0.379
2018	East African Safari Air Express Limited	0.287	0.401	0.404	0.553	0.354
2017	East African Safari Air Express Limited	0.233	0.373	0.342	0.445	0.592
2016	East African Safari Air Express Limited	0.247	0.377	0.324	0.456	0.493
2015	East African Safari Air Express Limited	0.252	0.336	0.308	0.309	0.582
2014	East African Safari Air Express Limited	0.295	0.33	0.347	0.376	0.554
2013	East African Safari Air Express Limited	0.287	0.315	0.34	0.381	0.419
2012	East African Safari Air Express Limited	0.295	0.379	0.354	0.436	0.462

2021	Fly540 Air services Ltd	0.31	0.396	0.405	0.427	0.557
2020	Fly540 Air services Ltd	0.326	0.31	0.408	0.492	0.511
2019	Fly540 Air services Ltd	0.328	0.297	0.411	0.527	0.401
2018	Fly540 Air services Ltd	0.333	0.333	0.39	0.5	0.332
2017	Fly540 Air services Ltd	0.282	0.361	0.347	0.418	0.378
2016	Fly540 Air services Ltd	0.323	0.348	0.422	0.533	0.403
2015	Fly540 Air services Ltd	0.31	0.338	0.378	0.475	0.327
2014	Fly540 Air services Ltd	0.336	0.352	0.415	0.541	0.425
2013	Fly540 Air services Ltd	0.266	0.347	0.331	0.376	0.419
2012	Fly540 Air services Ltd	0.258	0.395	0.333	0.349	0.444
2021	Fly-SAX Aviation Ltd	0.251	0.378	0.302	0.293	0.637
2020	Fly-SAX Aviation Ltd	0.26	0.383	0.301	0.321	0.469
2019	Fly-SAX Aviation Ltd	0.239	0.331	0.292	0.287	0.42
2018	Fly-SAX Aviation Ltd	0.238	0.39	0.288	0.257	0.477
2017	Fly-SAX Aviation Ltd	0.324	0.375	0.354	0.545	0.421
2016	Fly-SAX Aviation Ltd	0.235	0.359	0.27	0.352	0.3
2015	Fly-SAX Aviation Ltd	0.316	0.335	0.356	0.513	0.409
2014	Fly-SAX Aviation Ltd	0.281	0.346	0.319	0.474	0.455
2013	Fly-SAX Aviation Ltd	0.253	0.397	0.306	0.395	0.469
2012	Fly-SAX Aviation Ltd	0.297	0.401	0.338	0.481	0.519
2021	Kenya Airways Limited	0.327	0.373	0.361	0.533	0.478
2020	Kenya Airways Limited	0.274	0.377	0.318	0.408	0.539
2019	Kenya Airways Limited	0.317	0.336	0.365	0.438	0.541
2018	Kenya Airways Limited	0.282	0.33	0.319	0.345	0.446
2017	Kenya Airways Limited	0.271	0.315	0.308	0.367	0.38
2016	Kenya Airways Limited	0.288	0.379	0.333	0.409	0.376

2015	Kenya Airways Limited		0.263	0.396	0.278	0.317	0.354
2014	Kenya Airways Limited		0.248	0.31	0.276	0.341	0.455
2013	Kenya Airways Limited		0.306	0.297	0.335	0.384	0.39
2012	Kenya Airways Limited		0.279	0.333	0.305	0.36	0.303
2021	Safarilink Limited	Aviation	0.338	0.361	0.372	0.413	0.397
2020	Safarilink Limited	Aviation	0.332	0.348	0.362	0.396	0.343
2019	Safarilink Limited	Aviation	0.331	0.338	0.369	0.411	0.352
2018	Safarilink Limited	Aviation	0.297	0.352	0.329	0.356	0.334
2017	Safarilink Limited	Aviation	0.315	0.347	0.352	0.415	0.331
2016	Safarilink Limited	Aviation	0.307	0.395	0.35	0.379	0.363
2015	Safarilink Limited	Aviation	0.295	0.378	0.338	0.354	0.339
2014	Safarilink Limited	Aviation	0.339	0.383	0.397	0.592	0.366
2013	Safarilink Limited	Aviation	0.292	0.331	0.373	0.493	0.313
2012	Safarilink Limited	Aviation	0.312	0.39	0.399	0.582	0.334
2021	Skyward Limited	Express	0.331	0.375	0.396	0.554	0.362
2020	Skyward Limited	Express	0.275	0.359	0.337	0.419	0.404
2019	Skyward Limited	Express	0.28	0.335	0.357	0.462	0.303
2018	Skyward Limited	Express	0.293	0.346	0.361	0.557	0.351

2017	Skyward Limited	Express	0.318	0.325	0.393	0.511	0.309
2016	Skyward Limited	Express	0.274	0.34	0.339	0.401	0.48
2015	Skyward Limited	Express	0.23	0.339	0.262	0.332	0.433
2014	Skyward Limited	Express	0.245	0.363	0.304	0.378	0.453
2013	Skyward Limited	Express	0.256	0.361	0.301	0.403	0.531
2012	Skyward Limited	Express	0.223	0.346	0.292	0.327	0.338

Appendix IV: Introduction Letter



Kenya Methodist University

P. O Box 267 - 60200, Meru, Kenya, Tel: (+254-020) 2118423-7, 064-30301/31229 Fax: (+254-064) 30162 Email: info@kemu.ac.ke, Website: www.kemu.ac.ke

6th December, 2022

Executive Secretary
National Council for Science and Technology
P.O Box 30623 – 00100
NAIROBI

Dear Sir/ Madam,

RE: SAMUEL NGINYA NJOROGE- MFI-3-1938-3/2017

This is to confirm that the above named is a bona fide student of Kenya Methodist University pursuing a Master of Business Administration.

Samuel is undertaking a research study on 'Relationship between the financial structure and profitability of domestic commercial airlines in Kenya.'

To successfully complete his research work, he requires relevant data in his area of study.

In this regard, we kindly request your office to issue him a research permit to enable him collect the data for his academic research work.





We thank you in advance for your cooperation.



Nairobi Campus: Koinange Street, P.O. Box 45240-00100 Nairobi - Tel: +254-20-2118443/2248172/2247987/0725-751078. Fax: 254-20-2248160. Email: nairobicampus@kemu.ac.ke
Nakuru Campus: Macho Plaza, 4th Floor, P.O. Box 3654-20100, Nakuru, Tel: +254-51-3214438 Fax: 051-2218446. Email: nakurucampus@kemu.ac.ke
Mombasa Campus: Former Oshwal Academy, P.O. Box 89983, Mombasa. Tel: +254 - 041-2489945 / 8, Fax 041-2489946. Email: mombasacampus@kemu.ac.ke
Nyeri Campus: Lware Building, 4th Floor. Tel: +254-61-2032904. Fax: 254-61-2004190. Email: nyericampus@kemu.ac.ke

The Future Is Here!

Appendix V: Research Permit

 <p style="text-align: center;">REPUBLIC OF KENYA</p> <p>Ref No: 578748</p>	 <p style="text-align: center;">NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION</p> <p style="text-align: right;">Date of Issue: 21/December/2022</p>
RESEARCH LICENSE	
	
<p>This is to Certify that Mr.. SAMUEL NGINYA NJOROGE of Kenya Methodist University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev:2014) in Kiambu on the topic: Relationship between the Financial Structure and Profitability of Domestic Commercial Airlines in Kenya for the period ending: 21/December/2023.</p>	
<p>License No: NACOSTI/P/22/22732</p>	
<p>Applicant Identification Number 578748</p>	
<p style="text-align: right;"><i>Walter Kimani</i> Director General</p> <p style="text-align: center;">NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION</p>	
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