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*The Impact of Debt Financing on the Financial Performance of  
Airline Companies Listed on the London Stock Exchange*

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## **DECLARATION**

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I, Zeel Mihir Patel, declare that this dissertation has been composed by myself, that the work contained herein is entirely my own except where explicitly stated otherwise in the text, and that this work has not been submitted for any other degree or qualification, in whole or in part, except as specified.

Signature: Zeel Mihir Patel

Date: 7th September 2025

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To God Almighty, I raise my deepest gratitude. It is by His grace that light has guided me through moments of doubt, and strength has carried me when the path grew heavy. Every page of this work is a reflection of blessings far greater than my own effort.

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## ABSTRACT

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**Background:** The capital structure of airline companies is critical to financial performance due to the capital-intensive nature of the industry. While debt financing supports expansion, excessive borrowing can reduce liquidity and profitability, particularly under volatile market conditions.

**Methods:** The study applied regression analysis on secondary financial data from four London Stock Exchange, listed airlines, International Airlines Group (IAG), EasyJet, Wizz Air, and Jet2, to examine the effect of debt ratio and debt-to-equity ratio on current ratio, return on assets (ROA), and return on equity (ROE).

**Results:** The debt-to-equity ratio showed a significant negative effect on the current ratio, indicating that equity financing strengthens liquidity. Debt ratio had a significant negative effect on both ROA and ROE, while debt-to-equity ratio was insignificant for ROA and weakly negative for ROE.

**Conclusion:** Excessive debt undermines liquidity and profitability in London-listed airlines, supporting the Trade-off and Pecking Order theories while challenging Modigliani–Miller’s irrelevance view. Prudent debt management is essential for sustaining financial stability and shareholder value in the airline sector.

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# CHAPTER 1: INTRODUCTION

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## 1.1 Research Background and Problem Statement

The capital structure of airline companies plays a crucial role in their financial performance, especially considering the capital-intensive nature of the industry (Alsulami, 2025). Debt financing is often used to meet the high costs of aircraft acquisition and maintenance. However, excessive debt can strain liquidity and profitability, particularly during economic downturns, fuel price fluctuations, or geopolitical uncertainties. For example, International Airlines Group (IAG) faces vulnerabilities due to its significant debt load, standing at €7.5 billion, which could impact its ability to service debt and affect profitability in volatile market conditions (Lea, 2025).

Liquidity is another challenge, as debt financing can reduce the available cash flow, limiting an airline's ability to reinvest in operations (Alsulami, 2025). EasyJet, despite strong liquidity in early 2025, still faces future profitability concerns due to rising operational costs. High debt levels can also impact profitability, as airlines allocate substantial revenue to interest payments. Wizz Air, with a high debt-to-equity ratio, illustrates how debt can exacerbate operational challenges, as evidenced by the €241 million loss caused by engine issues (EasyJet Plc, 2023).

The competitive pressures within the airline industry further complicate debt management, as airlines must adapt to changing demand and external factors. Jet2's conservative debt-to-equity ratio of 60% shows effective capital management, but even well-managed companies face external financial pressures (London Stock Exchange, 2025). Additionally, debt servicing and refinancing pose risks, particularly during economic recessions. Air Astana, despite its prudent capital structure, faces ongoing challenges in managing debt servicing and long-term growth, highlighting the complexity of maintaining financial stability with high leverage (Asian Aviation, 2025).

In general, despite the benefits of debt funding for expansion, it adds challenges such as not having enough liquidity and being pressured to make profits, so airline companies listed on the LSE should manage these risks to avoid financial problems.

## **1.2 Research Aim**

The aim of this research is to analyse the impact of debt financing on the financial performance of airline companies listed on the London Stock Exchange

## **1.3 Research Questions**

1. To what extent do airline companies listed on the London Stock Exchange utilise debt financing?
2. How does debt financing affect the liquidity of airline companies listed on the London Stock Exchange?
3. What is the impact of debt financing on return on assets (ROA) and return on equity (ROE) for airline companies listed on the London Stock Exchange?

## **1.4 Research Objectives**

1. To measure the extent of debt financing utilised by airline companies listed on the London Stock Exchange.
2. To examine the effect of debt financing on the liquidity of airline companies listed on the London Stock Exchange.
3. To evaluate the impact of debt financing on return on assets (ROA) and return on equity (ROE) for airline companies listed on the London Stock Exchange.

## **1.5 Rationale and Significance of the Study**

This study is significant as it addresses the critical role of debt financing in the financial performance of airline companies listed on the London Stock Exchange (LSE), an industry that is inherently capital-intensive and subject to various economic and operational risks. By examining the impact of debt on key financial metrics such as liquidity, profitability, and stock return, this research will provide valuable insights into how debt financing strategies affect the overall stability and performance of airlines. With airlines facing unique challenges such as fluctuating fuel prices, geopolitical uncertainties, and the ongoing demand for fleet modernization, understanding the relationship between capital structure and financial outcomes is essential for making informed decisions. The findings of this study will not only help industry stakeholders, including investors, policymakers, and airline management, better navigate the complexities of debt management but also contribute to the broader academic discourse on corporate finance in the aviation sector. Moreover, as debt financing is a

crucial tool for business expansion, this research will highlight how airlines can balance their debt levels to optimize financial performance and minimize risks, ensuring long-term sustainability.

## **1.6 Brief Research Methodology**

The research design of this study is systematic and structured using a guide of the Saunders Research Onion (Saunders *et al.*, 2019). This research employed a quantitative design, using secondary financial data from 4 prominent airline companies listed in London Stock Exchange (LSE). The veracity is used by the study which is based on the positivist philosophy, which believes in the objective and measurability of reality, which allows application of statistical approach to test the connection between debt financing and financial performance (Collis and Hussey, 2014). The strategy of deductive approach is followed to verify the financial theories that already exist, including the Trade-off Theory and the Pecking Order Theory by developing a hypothesis and test them on the available data (Saunders *et al.*, 2019). The effects of debt on the important financial variables such as liquidity, return on assets (ROA), return on equity (ROE), and stock returns are evaluated by the Ordinary Least Squares (OLS) regression. The approach also guarantees rigor, objectivity, and transparency in deciding data that has been gathered during a period of ten years, which would serve to bring forth insightful information on how debt financing affects the financial performance of these airlines in various stock exchanges.

## **1.7 Structure of rest of project**

Chapter 2, the Literature Review, covers theories and findings on the subject of debt financing and its effects on the financial results of airline companies. The Methodology, Chapter 3, presents the research design, philosophy, methods of data collection and data analysis that are employed to assess the relationship between debt and financial performance. Chapter 4, Results and Discussion, provides the findings of the data analysis following the impact of debt financing on liquidity, profitability, and stock returns and a discussion of the findings in terms of the actual literature. Lastly, Chapter 5, Conclusion and Recommendations, gives an overview of the most important findings, gives some practical recommendations to airline management, and offers the avenues to pursue in further research.

## CHAPTER 2: LITERATURE REVIEW

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### 2.1 Introduction

This chapter is intended to critically analyse the current body of literature which is associated with the effect of debt financing on the financial performance of airline companies, with particular reference to London Stock Exchange (LSE) listed companies. To bring out the context of the study and to defend the choice of variables, methodology, and analytical framework employed at later stages of this research, it is imperative to understand theoretical and empirical underpinnings of this relationship.

As an element of firm capital structure, debt financing has been a subject of long-standing controversy in the literature of corporate finance. Different theories, including the Modigliani and Miller Theorem, Trade-Off Theory, and the Pecking Order Theory, offer conflicting viewpoints of the effect of leverage on firm value and performance. Although there are studies that posit that debt may improve financial performance by offering tax shields and financial discipline, other studies have pointed out risks of financial distress and lessened flexibility.

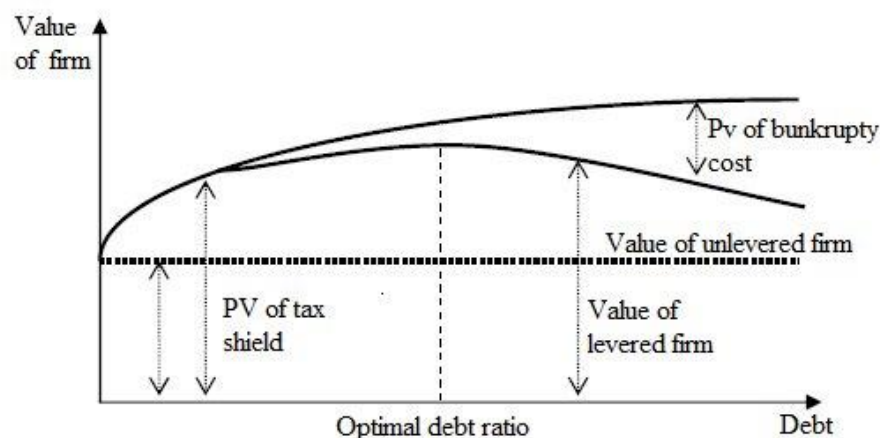
In the airline industry, capital structure is a highly sensitive topic to examine because it has a high level of operating leverage, a high capital requirement, and macroeconomic volatility. Given these characteristics, the financing strategies adopted by airline companies, and their implications for profitability and efficiency, have attracted considerable scholarly attention. However, most existing studies focus on global or U.S.-based airlines, leaving a gap in the literature regarding airlines listed on the LSE, especially in the post-pandemic financial environment.

This chapter begins by exploring the theoretical underpinnings of debt financing and financial performance, followed by a review of empirical research in both general and industry-specific contexts. It also highlights critical gaps in the literature and introduces the conceptual framework that guides the current study.

## 2.2 Research Areas / Topics

### 2.2.1 Theoretical Frameworks

**Trade-off Theory:** According to this theory, companies try to balance their debt and equity to get the best results for their value. The theory highlights that businesses must consider the benefits of debt, such as tax shields and increased borrowing power, against its drawbacks like bankruptcy risk, financial distress, and high interest costs (Myers, 2001). The Trade-off Theory was originally formalised by Kraus and Litzenberger (1973), who built on the foundational work of Modigliani and Miller (1963) by arguing that firms aim for an optimal capital structure where the marginal benefit of debt equals its marginal cost. Because airlines require substantial capital to operate, debt financing enables them to expand and respond quickly to market opportunities. However, excessive debt can weaken both liquidity and profitability. This theory explains why debt is often strategically chosen in the airline industry, as it supports competitive positioning and growth in capital-intensive markets (Frank & Goyal, 2009).



*Figure 1 The Trade-Off Theory of Capital Structure (Ghazouani, 2013)*

**Pecking Order Theory:** Myers and Majluf's (1984) Pecking Order Theory states that managers prefer to finance the firm internally because external investors may not have the same amount of information. If companies need to borrow funds from outside, they first choose debt and only use equity as a backup source (Myers & Majluf, 1984). This theory makes sense for airline companies that could opt for debt instead of issuing more shares because they want to keep control. For instance, during uncertain financial periods or rapid growth that needs a lot of resources, airlines may depend on

debt to keep their operations flexible and safeguard their shareholders' interests (Baker & Wurgler, 2002).



*Figure 2 Pecking Order Theory (Arinzeh, 2022)*

**Agency Theory:** Agency Theory examines the conflicts of interest between different stakeholders in a firm, primarily between managers (agents) and shareholders (principals), and how these conflicts influence financial decision-making. First introduced by Jensen and Meckling (1976), the theory suggests that managers may not always act in the best interests of shareholders, particularly when there is excess free cash flow. One way to reduce agency costs is through the use of debt financing, which limits the amount of discretionary funds available to managers and disciplines their spending behaviour. Debt serves as a governance mechanism to align managerial actions with shareholder interests. However, excessive debt can increase financial risk and may be viewed by shareholders as a threat to earnings stability (Easterbrook, 1984). In the airline industry, where capital intensity and operational volatility are high, if managers prioritise short-term goals or personal incentives in choosing debt levels, this can expose the firm to greater financial distress, reducing long-term profitability and shareholder value.

## 2.2.2 Debt Financing and Financial Performance Metrics

### 2.2.2.1 Metrics of Debt Financing

The relationship between debt financing and financial performance is often quantified using several key financial ratios, which help analysts and investors assess the level of leverage employed by firms. These metrics not only provide insight into the company's debt obligations but also help evaluate the risks associated with its capital structure. The following are commonly used debt metrics:

- **Debt-to-Equity Ratio (D/E):** Debt-to-Equity Ratio is a leverage measure which is most commonly applied and is calculated by total debt divided by equity of shareholders. A large D/E ratio indicates that the company is greatly dependent on debt in terms of financing which has the potential of increasing financial risk. On the other hand, a low ratio can mean that leverage was not utilised fully and this could result into reduced growth opportunities. This ratio is critical to the way an airline company balances its debt against equity and the effect that it might have on its performance.
- **Debt Ratio:** Debt Ratio is a ratio of total assets of a company to total debt. This is determined by dividing total debt by total assets. When the debt ratio is high, it shows that the company has more used borrowed funds to finance assets, thus it is likely to run out of money. This ratio is important in the airline industry that involves a huge capital input to evaluate the financial health of companies and the leverage effects that may affect the performance.
- **Long-term Debt to Capitalisation Ratio:** It is a ratio used to determine the percentage of long-term debt which is part of the total capitalization of a company (long-term debt plus equity). It is especially crucial when investing in long-term ventures such as airlines where huge long-term investments are a norm. Higher ratio means a greater dependency on debt to fund long-term financing that can be both positive and negative to profitability and financial health.
- **Long-term Debt to Capitalisation Ratio:** This ratio measures the proportion of a company's long-term debt in relation to its total capitalization (the sum of long-term debt and equity). It is particularly important for industries like airlines, where significant long-term investments are common. A high ratio indicates a

heavier reliance on debt for long-term financing, which may have both positive and negative implications for profitability and financial health.

- **Interest Coverage Ratio (Times Interest Earned):** The Interest Coverage Ratio is calculated as a ratio of earnings before interest and taxes (EBIT) and interest expenses in order to assess how a firm can meet its interest payments. An increased ratio implies a financial health since the payment of the interest due can easily be done and the company is not at the risk of defaulting. Airlines, where they have high fixed costs are especially susceptible to changes in profitability and this ratio is very important in realising the interrelationship between debt and financial performance.
- **Net Debt-to-EBITDA Ratio:** Net Debt-to-EBITDA ratio is a comparison of the net debt of a company (total debt less cash) and its earnings before interest and tax, depreciation and amortisation (EBITDA). This ratio is an indication of the capacity of a company to settle its debt using its operation earnings. Higher ratio shows a greater ability to service debt, which is especially crucial in the case of airlines that have to endure high debt burdens because the industry is capital intensive.

#### **2.2.2.2 Financial Performance Metrics**

Financial performance of any company is generally measured in terms of various ratios of profitability and efficiency. Major financial performance measures that are commonly employed to determine the extent to which a capital structure of company (debt financing) affects the financial well-being of a company include the following:

- **Operating Profit Margin (EBIT Margin):** The operating profit margin or the EBIT margin is an indicator that shows the percentage of the income that is over and above the operating expenses without considering interest and taxes. It also gives an idea of the efficiency with which a company is realising profit through core operations. In the case of airlines where costs of operations are of great concern, this measure is important in determining how debt finance affects the efficiency in operations.
- **Net Profit Margin:** The net profit margin is calculated as Net income divided by total Revenue. This ratio indicates the profitability of the company, in general,



based on all expenses, such as interest on debt. The higher the net profit margin, the more effective the company is turning revenue into profit and it can also be an indicator of an effective approach to debt management in generating bottom-line growth.

- **Return on Assets (ROA):** Return on Assets (ROA) is an indicator of the efficiency with which a company employs its assets to make profit and is calculated as net income/total assets. High ROA means that the company is properly utilising its asset base in its generation of returns. In capital intensive sectors such as airlines, such a measure is vital in the analysis of trade off between debt and asset utilisation.
- **Return on Equity (ROE):** Return on Equity (ROE) is a ratio of net income to shareholders equity and measures how profitable shareholders investment is. The large ROE indicates that a company is efficiently using its equity to yield profit, which should be compared with the degree of debt financing since high leverage can unnaturally be inflated.

The section defines the major financial ratios that are employed in the analysis of both the leverage (debt financing) of a company and financial performance. Those metrics are the basis of the analysis further in the chapters, as they aim at comprehending the impact of debt on the financial performance of the airlines, especially those, which are traded on the London Stock Exchange.

### **2.2.3 Key Findings from Existing Literature**

Debt financing has a significant impact on airline companies depending on factors like the maturity of their loans, business size and the prevailing situation in the industry. It has been shown that short-term debt is more likely to impact the most important performance variables ROA and ROE in a more pronounced and detrimental manner than long-term debt. Short-term debt reduced ROE in the case of the food and beverage companies, but long-term debt impacted ROA with a small influence on ROE (Ardiyanto, 2020). The airline industry has the short-term debt, which has the potential of increasing the liquidity issues, primarily during the low flight demand or poor economy.

Another important aspect is how much debt a company has. When debt is high and most of it is long-term, it can reduce a company's profits due to the risk of financial trouble and expensive debt payments. It has been observed through several studies that large amounts of debt may reduce a company's profit (Rohilla & Sharma, 2023; Tauseef *et al.*, 2015). It was found in a study of Pakistan's transport sector that airline companies with a lot of debt usually struggle financially (Abbas *et al.*, 2020). Just as in Kenya, accumulated debt by airlines has been associated with lower profitability, showing how important it is to manage debt wisely (Malongo Lidovolo & Atieno, 2023).

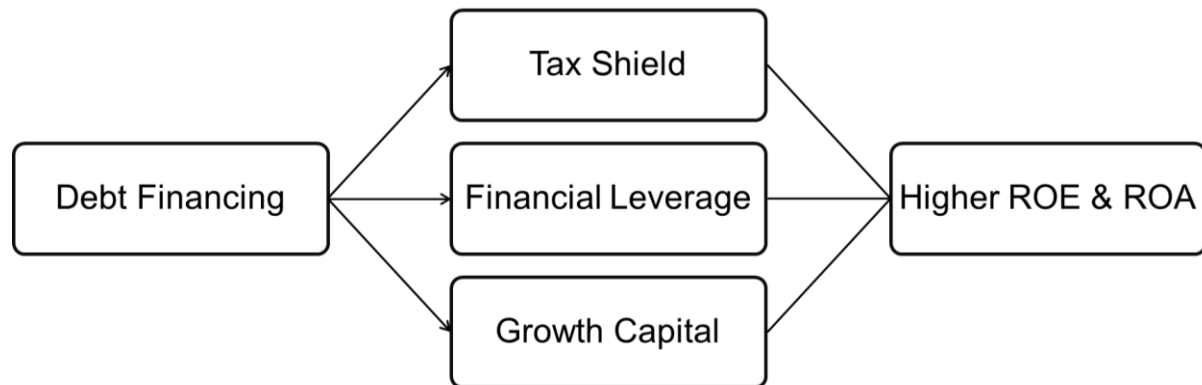
The way debt impacts a company's finances is sometimes affected by how big the company is. Because of their larger capital and steady operations, bigger firms usually do better with debt, but this can be difficult for smaller firms. According to the study, the amount of debt a manufacturing firm uses is strongly connected with its financial results, depending on the size and liquidity of the entity (Wayua, 2023). In addition, major airlines can deal with the problems of high debt more smoothly than small airlines because they have more resources and more operations.

What happens in a particular industry can also shape the link between debt and performance. In the aviation industry, it is common to rely on debt to purchase planes and build infrastructure, but too much debt might stop the airline from performing well. It was found by Kirimi *et al.* (2017) in Pakistan and Rashid and Iqbal (2021) in Kenya that high debt-to-equity ratios cause companies to perform less well (Kirimi *et al.*, 2017; Rashid & Iqbal, 2021). Some studies argue that having debt may actually boost the performance of certain businesses. In the consumer goods sector of Nigeria, taking on long-term debt had a positive effect on company results, pointing out that using debt wisely can boost a company's finances (Jones & Aruobogha, 2019). Using debt, airlines can grow their fleets or launch new routes, but only if it does not exceed their capacity to make profits.

It is commonly discussed in studies that debt financing may lead to financial trouble for a business. If interest payments are not handled well, debt financing can cause a company to lack the funds it needs. If airlines have a lot of debt, they are more exposed to changes in the economy, fuel prices, and other dangers that can harm their finances and profits. According to studies, leasing to obtain debt can make an airline industry company face greater risks and challenges to its stability (Gritta & Lippman, 1994). It

shows that airlines should watch their debt carefully, so that debt never leads to big financial problems.

## 2.3 Conceptual Framework



**Figure 3 The Influence of Debt on Financial Performance (Author)**

The conceptual framework demonstrates that debt financing increases a company's profits by using important financial strategies. Interest payments for debt can be deducted from taxes, which helps the company pay less taxes and get more net income (Lei, 2020). Besides, firms may borrow cash and use it in investments that offer a return higher than what they pay for the debt, which improves their financial situation (Arhinful & Radmehr, 2023). Debt allows companies to get the funds they need to carry out growth and smooth operations (Andrieu *et al.*, 2021). Because of these factors, a company can achieve better ROI and ROE, indicating that the wise use of debt can be valuable for its results.

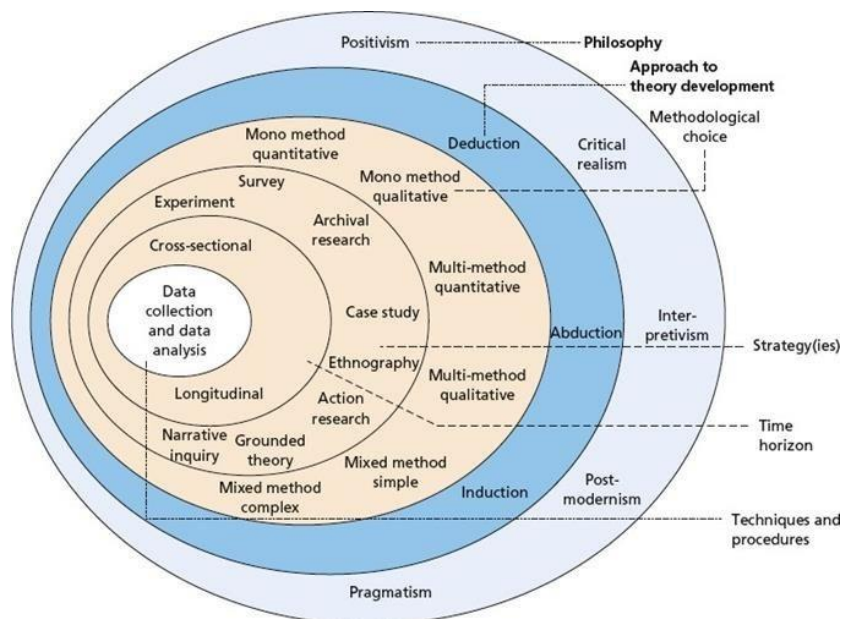
## 2.4 Summary & Research Gap

Past research indicates that the financial outcomes of airline companies when they use debt financing may be positive or negative, depending on aspects such as maturity of the debt in question and the magnitude of the company. Although having a lot of debt tends to result in generating less profit and experiencing economic problems, the studies reveal that good debt management can even contribute to the improved performance of a company. Simultaneously, the research on the impact of debt financing on the financial outcomes of airline businesses listed on the London Stock Exchange (LSE) is inadequate. This paper attempts to close this gap by examining the effect of debt on liquidity, profitability and share prices of LSE-based airlines. The findings will provide practical recommendations on the way to deal with debt in this

## CHAPTER 3: RESEARCH METHODOLOGY

### 3.1 Introduction

The methodology used to explore the impact of debt financing on the financial performance of airline companies listed on the London Stock Exchange (LSE), is described in this chapter. This study is directed by the Saunders Research Onion (Saunders *et al.*, 2019), which has a systematic way of making informed choices regarding research philosophy, approach, design, strategy, and data analysis. A rigorous and coherent study has been achieved by ensuring that each methodological layer has been selected in connexion with the research aim and objectives.



**Figure 4 The Research Onion Framework (Saunders *et al.*, 2019)**

Since this study is quantitative, positivism philosophy and deductive method have been applied to the study to test the existing financial theories using real world data. The research considers the secondary financial information of six airline firms quoted on LSE, examines their debt position and performance measures, including the return on assets (ROA), return on equity (ROE), liquidity ratios, and stock returns during a decade. To evaluate the statistical relations between debt financing and firm performance, ordinary least squares (OLS) regression is used. This chapter justifies these methodology decisions and secures transparency, dependability, and ethical adherence in the course of research.

### **3.2 Research Philosophy**

Research philosophy is a belief system that aids in the way knowledge is created and perceived in a research project (Saunders *et al.*, 2019). In this study, a positivist philosophy has been embraced. Positivism is based on the belief that reality is objective and measurable and that knowledge is acquired by observational and empirical data and logical argumentation (Collis and Hussey, 2014).

The philosophy suits the current study that examines the effects of debt financing on the financial performance of airline companies using quantitative financial data. Positivism also advocates the application of systematic methodologies and statistical methods thus will be suitable in testing a hypothesis guided by formulated theories like the Trade-off Theory, the Pecking Order Theory, and the Agency Theory (Bryman and Bell, 2015). Using a positivist assumption, the study aims to find patterns, relationships and generalisable results that could be extrapolated beyond the immediate sample of study.

Moreover, positivism focuses on value-neutral inquiry, during which the researcher is neutral and disinterested in the topic he or she is studying (Remenyi *et al.*, 1998). This also corresponds well with the use of secondary data; data derived through company reports and stock exchange databases that ensures the research was not biased based on personal beliefs.

All in all, the positivist philosophy offers a strong epistemological basis of this research and makes it possible to test theoretical propositions with rigidity using empirical observation and statistical analysis.

### **3.3 Research Approach**

The research method of this work is the deductive approach, which implies the elaboration of hypothetical assumptions on the basis of existing theory and then applying them to empirical data (Saunders, Lewis and Thornhill, 2019). The deduction approach is especially appropriate in studies that use a positivist philosophy because it allows the researcher to determine the cause-and-effect relationship amongst variables through the use of guided, scientific procedures.

The deductive approach starts with the discovery of theoretical models like the Trade-off Theory, Pecking Order Theory, and the Agency Theory, which describe various

motives and results of corporate debt financing. Those theories form the conceptual basis of the creation of the testable hypotheses on the relationship between debt level and the major performance indicators that include the return on assets (ROA), the return on equity (ROE), liquidity ratios, and the stock returns.

Through the implementation of this method, the study logically examines the extent to which the empirical data of the sampled airline firms listed at London Stock Exchange (LSE) supports or counters these theoretical assumptions. Quantitative secondary data makes it possible to measure and generalise findings objectively, which is a characteristic of the deductive process (Bryman and Bell, 2015).

Also, the deductive method makes the study more reliable and replicable because the theory leads to a simple and logical set of actions to collect data, analyse it, and draw a conclusion (Robson and McCartan, 2016). This renders it particularly suitable in financial research purported to test the validity of the existing economic theories in a practical scenario.

### **3.4 Methodological Choice**

The methodological selection in this study is quantitative; it is a method that entails utilising figures and statistical methods to test the association between variables (Creswell, 2014). Quantitative research is aligned with the positivist philosophy and deductive research approach that is adopted in the current study because it can easily test the hypothesis and objectively measure financial performance indicators.

The study will seek to investigate the relationship between debt financing and the financial performance of airline companies that are listed on the London Stock Exchange (LSE). To attain this, the research will be based on secondary financial information including return on assets (ROA), return on equity (ROE), liquidity ratios, stock returns and debt-to-equity ratios. These data are quantitative in nature and can be analysed empirically with statistical tools like Ordinary Least Squares (OLS) regression.

This is a purely quantitative mono-method approach, since it permits the focused analysis with rigorous analysis and does not require any form of integration of qualitative components. This will be consistent, reproducible and will yield generalisable results across the chosen companies and the time frame. Reliability and

internal validity of the findings are reinforced by the application of structured datasets and econometric analysis (Saunders, Lewis and Thornhill, 2019).

The adopted methodological approach is fitting a financial study, in which performance can be most effectively quantified by means of numerical measurements and analysed by means of effective statistical tools.

### **3.5 Research Strategy**

Research strategy establishes the general way in which the researcher will answer research questions (Saunders, Lewis and Thornhill, 2019). In this research, a multiple case study approach is utilised with four airline companies in the London Stock Exchange (LSE): International Airlines Group (IAG), EasyJet, Jet2 plc, Wizz Air, Air Asyana, and one other company chosen due to the availability of data.

Case study strategy could enable a deeper analysis of the debt financing practises and financial results of each company in ten years. Multiple-case approach increases the strength of the findings in that it allows cross-case comparison and advances external validity (Yin, 2018). It offers greater insights into the management of debt by various airline companies and its impact on major financial ratios including ROA, ROE, stock returns and liquidity.

This method is particularly applicable where the researcher needs rich and longitudinal information, e.g. a financial research context, to identify patterns, trends and variations among companies. Despite the common use of case studies in qualitative research, it is in this case that it is purely quantitative, with structured financial data to test hypotheses.

The case study approach is compatible with the deductive method used in the study, because it will allow conducting empirical tests of theoretical hypotheses based on the Trade-off Theory, Pecking Order Theory, and Agency Theory. The emphasis on the airline companies listed in LSE also creates the contextual relevance, so that the research could be anchored at a certain economic and regulatory environment.

### **3.6 Time Horizon**

This research will use a longitudinal time horizon as it implies the gathering and analysis of data in a long-term span (Saunders, Lewis and Thornhill, 2019). Longitudinal approach would be most suitable in this study since the study will be able



to observe trends, patterns and changes in the correlation existing between debt financing and financial performance of airline companies listed on the London Stock Exchange (LSE).

This study takes panel data that covers 10 years; this allows in the evaluation of the level of debt within the financial status regarding the impact of debt level on key financial ratios including the return on assets (ROA), the return on equity (ROE), stock returns and liquidity ratio in the long run. Such time horizon is useful in deductively testing the financial theories like Trade-off Theory and Pecking Order Theory by assessing the validity of their assumptions in various economic circumstances and periods of company performance.

Unlike a cross-sectional design that would just provide a picture of a single point in time, longitudinal methodology would provide better reliability and validity to the findings since it does not ignore the dynamics of time and their long-term impact.

### **3.7 Data Collection and Analysis**

The research involves use of secondary data collection based on the publicly available financial information in the annual reports and financial statements of airline companies listed in the London Stock Exchange (LSE). The sample of the chosen companies International Airlines Group (IAG), Easy Jet, Jet2 plc and Wizz Air, between 2015 and 2024, are selected due to their steady reporting and available data during a decade of uninterrupted data.

***Table 1 LSE Listed Airline Companies***

<b>Company</b>	<b>Founded / Established</b>	<b>Listed on LSE</b>
International Airlines Group	2011 (via merger of BA & Iberia)	2011
easyJet plc	1995	2000
Jet2 plc	1971 (as Dart Group)	2005
Wizz Air Holdings plc	2003	2015

The research begins by analysing debt financing practises used by these airline firms based on the research objectives by gathering information on the debt-to-equity ratios



of these companies. In order to determine the impact of debt financing on liquidity, the study examines the main liquidity ratios, including the current ratio and quick ratio. Furthermore, to determine the effects of debt financing on financial performance, the research examines the profitability measures such as the return on assets (ROA) and the return on equity (ROE). This information is obtained in company filings and LSE reports and analysed with Microsoft Excel.

Ordinary Least Squares (OLS) regression is the accepted statistical tool used to analyse relationships of financial variables. The approach applied to identify trends and patterns across a time period and across firms is feasible due to the adoption of panel data, which can capture the cross-sectional and time-series dimensions (Baltagi, 2005). The regression models establish the strength of the relationship between debt and each performance measure and also the significance. The data is evaluated against the main assumptions of OLS, including linearity, homoscedasticity or normal distribution of the residuals (Wooldridge, 2016).

Such a quantitative methodology allows the systematic objective study of the correlation between debt financing and financial performance, which aligns with the positivist philosophy and the deductive logic of the study.

### **3.8 Ethical Considerations**

Ethical considerations constitute a fundamental component of the research process and make the study responsible, transparent and compliant with institutional and academic norms. The research follows the University of Wales Trinity Saint David (UWTSD) Research Ethics and Integrity Code of Practise (2022) that provides the guidance on the principles of integrity, transparency, respect, and accountability in research work.

Since the proposed study is entirely relying on secondary data provided by publicly available sources, including annual reports, financial statements and stock exchange information, there will be no human participation or personal data involved. Thus, there is a low level of ethical risk associated with the research. However, analysis will not be performed without providing the formal ethical approval to make sure that the ethical procedures of the university are followed.

Every information will be utilised in the right spirit and with a sense of responsibility and without misrepresentation or misinterpretation of the financial data. In order to be

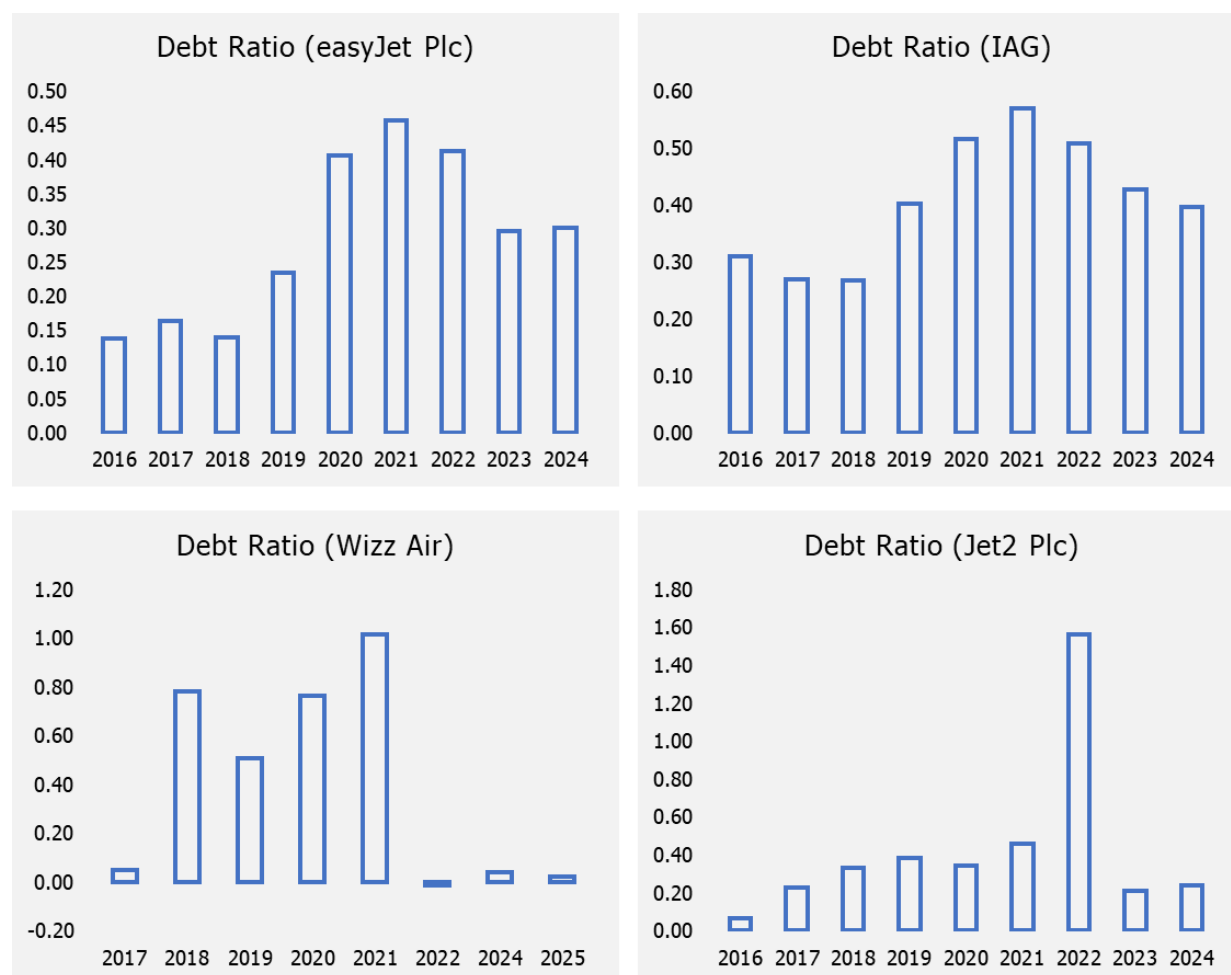
academically honest, all sources will be referenced, and the study will not be skewed or distorted by results. Also, no reputational damage to the companies under investigation will be inflicted, and the results will be objectively and respectfully displayed.

The adherence to these ethical standards means that the study is able to uphold academic rigour, and that the study is trustworthy in its analysis and conclusions.

## CHAPTER 4: FINDINGS AND DISCUSSION

### 4.1 Summary of Findings and Analysis

#### 4.1.1 The Debt to Asset Ratio of Airlines Listed on the LSE



**Figure 5 The Debt to Asset Ratio of Airlines Listed on the London Stock Exchange**

The analysis of debt-to-asset ratios among airline companies listed on the London Stock Exchange provides insight into the extent to which these firms rely on debt financing and how their capital structures have evolved over time.

EasyJet's debt-to-asset ratio shows that it has historically maintained a conservative stance, with low reliance on debt. The sharp rise during 2020 and 2021 suggests that the company turned to borrowing mainly as a response to the pressures of the pandemic, but the subsequent reduction back to 0.30 by 2023–2024 indicates a deliberate move to deleverage and restore balance. This reflects a strategy of using debt temporarily in times of crisis but not as a long-term financing tool.

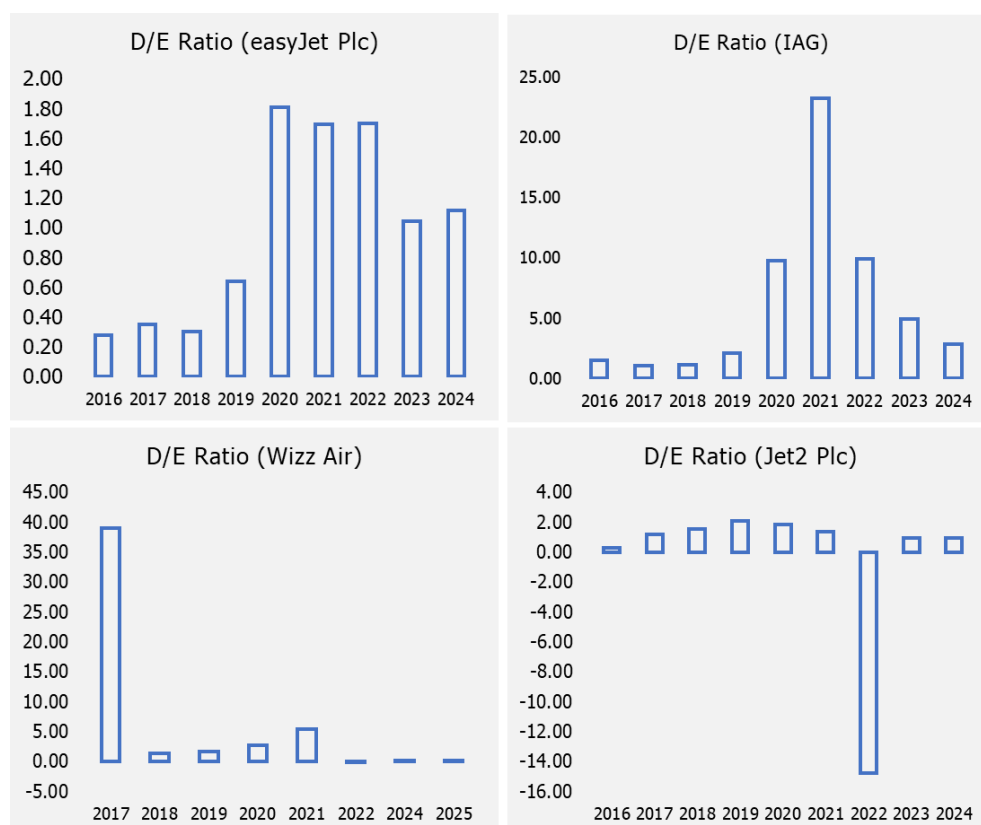
IAG, in contrast, has consistently shown higher debt levels throughout the period, reflecting a more entrenched reliance on debt financing as part of its operating and investment structure. Its ratio remained above 0.40 in most years, peaking at 0.57 in 2021, which underscores how the group leverages its scale and diversified operations to sustain higher levels of debt. Even with a gradual decline after 2021, IAG still maintains a debt-heavy profile compared to its peers, suggesting debt is an integral component of its long-term financing strategy.

Wizz Air's pattern is the most volatile. Initially carrying very low debt in 2016–2017, it ramped up leverage dramatically by 2018 as part of its expansion efforts, and by 2021 its debt exceeded its assets, signalling an extremely aggressive reliance on borrowing. Yet by 2022, the ratio dropped sharply, even turning slightly negative, which may indicate recapitalisation or asset strengthening relative to liabilities. The return to near-zero debt reliance by 2023–2024 demonstrates a radical shift in strategy, from aggressive debt use to extreme caution and equity dependency.

Jet2 shows a somewhat moderate start, with its debt ratio increasing gradually up to 2019. The pandemic years, however, exposed a strong dependence on debt, particularly in 2022, when its ratio spiked to 1.56, the highest among all four companies. This reliance suggests that Jet2 was heavily debt-financed to survive the crisis. Interestingly, its ratio fell back to 0.24 by 2024, highlighting a rapid deleveraging effort and a return to healthier balance sheet management.

Overall, these findings reveal very different financing behaviours among the four airlines. IAG consistently embraces debt as part of its strategic structure, while EasyJet takes a conservative stance and only increases borrowing during crises. Wizz Air's swings suggest a more opportunistic and shifting approach depending on growth or survival needs, and Jet2 demonstrates a clear crisis-driven reliance on debt followed by strong corrective action. A common theme, however, is that the pandemic pushed all carriers to increase their debt levels, though most have since rebalanced their capital structures, indicating resilience and efforts to reduce financial vulnerability.

### 4.1.2 The Debt to Equity Ratio of Airlines Listed on the LSE



**Figure 6 The Debt-to-Equity Ratio of Airlines Listed on the London Stock Exchange**

The analysis of debt-to-equity ratios among airline companies listed on the London Stock Exchange reveals how differently each company has relied on debt relative to shareholders' equity, and how these financing choices shifted over time, particularly during and after the COVID-19 crisis.

EasyJet began with a low debt-to-equity ratio of 0.28 in 2016, suggesting a cautious approach to leverage. However, the ratio rose sharply to 1.81 in 2020, showing that the airline turned heavily to debt financing during the pandemic. Even though it has since reduced its reliance, the ratio has stabilised above pre-crisis levels, at around 1.11 by 2024, implying that EasyJet still carries more debt relative to equity than it did before 2019. This suggests a partial but incomplete deleveraging effort.

IAG consistently displays much higher debt-to-equity levels, beginning at 1.50 in 2016 and rising dramatically during the pandemic years, reaching a peak of 23.18 in 2021. This extreme level of leverage indicates that IAG leaned heavily on borrowing to support its large-scale operations in a period of severe revenue collapse. Although the ratio has declined since then, it remains relatively high at 2.81 in 2024 compared to

other airlines, highlighting IAG's structural dependence on debt financing as part of its business model.

Wizz Air's ratios are notably volatile. In 2017, it spiked to an extraordinary 39.04, reflecting unusually high debt levels compared to its equity base, possibly linked to rapid expansion. After that, the ratio dropped significantly, stabilising around 1.35–2.70 during 2018–2020, but rising again to 5.32 in 2021. A remarkable shift occurred in 2022, when the ratio dropped to -0.01, implying that equity outweighed liabilities, possibly due to recapitalisation or restructuring. By 2024, it had stabilised near zero (0.02), meaning Wizz Air now relies almost entirely on equity and holds negligible debt exposure.

Jet2 shows a more moderate trajectory initially, rising from 0.29 in 2016 to 2.09 in 2019, consistent with growing reliance on debt. In 2020 and 2021, the ratio hovered between 1.37 and 1.83, indicating continued leverage but at more manageable levels compared to peers. The most striking anomaly occurred in 2022, when the ratio plunged to -14.81, reflecting a negative equity position where liabilities greatly outweighed assets. This suggests severe financial strain and balance sheet deterioration during the crisis. By 2023–2024, Jet2 recovered, with ratios around 0.94–0.95, signalling successful restructuring and a return to more sustainable debt levels.

Taken together, these results show that IAG consistently embraces high leverage as part of its capital structure, while EasyJet tends to be conservative, increasing debt only during times of crisis but not fully reverting afterward. Wizz Air and Jet2 display greater volatility, with extreme swings in their ratios, reflecting both aggressive expansion strategies and the disruptive financial pressures of the pandemic. Across all four airlines, the data underscores how the COVID-19 crisis amplified reliance on debt financing, followed by attempts—successful to varying degrees—to deleverage and restore financial stability.

## 4.2 Correlation between Debt Ratios and Performance Ratios

*Table 2 Correlation Matrix of Debt Ratios and Performance Ratios*

	Debt Ratio	D/E Ratio	Current Ratio	ROA	ROE
Debt Ratio	1.00				
D/E Ratio	-0.22	1.00			
Current Ratio	0.24	-0.53	1.00		
ROA	-0.37	0.09	-0.36	1.00	
ROE	-0.31	-0.21	-0.12	0.51	1.00

Examining the correlation between debt financing ratios and performance ratios provides valuable insight into how leverage influences the financial health and efficiency of airline companies. By analysing the relationship between the Debt Ratio and Debt-to-Equity Ratio with key indicators such as the Current Ratio, Return on Assets (ROA), and Return on Equity (ROE), it becomes possible to understand whether higher reliance on debt enhances or undermines liquidity, profitability, and shareholder returns. This assessment highlights both the potential benefits of moderate debt use and the risks associated with excessive leverage.

### Debt Ratio vs. Performance Ratios

- **Debt Ratio and Current Ratio (0.24):** The weak positive correlation suggests that when firms take on slightly more debt relative to assets, their short-term liquidity (ability to cover current liabilities) also increases. This may indicate that moderate debt is used to finance working capital, helping maintain liquidity. However, the relationship is weak, so the effect is not strong or consistent.
- **Debt Ratio and ROA (-0.37):** The negative relationship shows that as debt financing rises, returns on assets decline. Higher debt increases interest obligations, which erodes profitability relative to total assets. This reflects the cost of leverage outweighing its potential benefits for asset efficiency.
- **Debt Ratio and ROE (-0.31):** The negative correlation indicates that higher debt use is associated with lower returns to shareholders. In theory, leverage can boost ROE when returns exceed borrowing costs, but here, it appears

excessive debt undermines equity performance—likely due to high financial costs and risks reducing net earnings.

### **Debt-to-Equity Ratio vs. Performance Ratios**

- **D/E Ratio and Current Ratio (-0.53):** This moderate negative correlation suggests that firms with higher debt relative to equity tend to have weaker liquidity positions. Heavy reliance on debt may strain current obligations, reducing the firm's ability to meet short-term liabilities. This indicates that aggressive leverage is detrimental to liquidity.
- **D/E Ratio and ROA (0.09):** The correlation is very weak and slightly positive, implying little to no meaningful relationship between leverage and asset profitability. While debt can potentially enhance returns, in this case, the effect is minimal—suggesting operational efficiency is not strongly driven by leverage.
- **D/E Ratio and ROE (-0.21):** The weak negative correlation suggests that higher leverage tends to reduce shareholder returns. This goes against the traditional expectation of positive leverage effects on equity returns, likely because in practice, high interest expenses or financial risks outweigh potential profitability gains.

The results indicate that greater reliance on debt financing (both Debt Ratio and D/E Ratio) generally harms profitability (ROA and ROE) and reduces liquidity (Current Ratio), particularly when leverage becomes excessive. While some moderate debt may support liquidity (as seen with the weak positive link between Debt Ratio and Current Ratio), higher debt burdens appear to create financial strain, lowering efficiency and returns. This implies that for airlines, which are capital-intensive and highly sensitive to external shocks, debt financing must be managed cautiously. Excessive leverage increases financial risk and undermines performance, while balanced debt use may support liquidity without overly damaging profitability.



## 5.1 Regression Analysis and Findings

*Table 3 Regression Analysis of Current Ratio with Debt and D/E Ratios*

Dep. Variable:	Current Ratio		R-squared		0.30
Model	OLS		Adj. R-squared		0.25
Method	Least Squares		F-statistics		6.98
No. Observation	36		Prob (F-statistics)		0.00296
Df Residuals	33		Df Model		2
	Coef	Std Err	t-stat	p-value	95% Con. Int.
Intercept	1.02	0.09	10.89	0.00	(0.83, 1.21)
Debt Ratio	0.16	0.19	0.87	0.39	(-0.22, 0.54)
D/E Ratio	-0.02	0.01	-3.35	0.00	(-0.04, -0.01)

The regression analysis of the Current Ratio with Debt Ratio and Debt-to-Equity Ratio provides a clear view of how debt financing influences short-term liquidity in the airline companies under study. Based on the regression analysis, the regression equation for the Current Ratio is:

$$\text{Current Ratio} = 1.02 + 0.16 (\text{Debt Ratio}) - 0.02 (\text{D/E Ratio})$$

The constant of 1.02 indicates that in the absence of debt, firms maintain a healthy liquidity position with a current ratio slightly above one, reflecting strong ability to meet short-term obligations. The coefficient for the Debt Ratio is positive but insignificant, suggesting that a higher debt-to-asset ratio does not reliably improve liquidity. The coefficient for the Debt-to-Equity Ratio is negative and significant, showing that higher leverage relative to equity consistently reduces liquidity, meaning firms with heavier debt loads relative to equity face greater difficulty covering short-term liabilities.

The model explains around 30 percent of the variation in the Current Ratio, with an adjusted R-squared of 0.25, which indicates that while debt financing variables are significant contributors, other factors outside of debt structure also play an important role in determining liquidity. The overall model is statistically significant, with an F-statistic of 6.98 and a p-value of 0.00296, meaning that together the predictors provide meaningful explanatory power for changes in the Current Ratio.

The intercept of 1.02 is statistically significant and positive, showing that in the absence of debt financing effects, companies tend to maintain a strong liquidity position with a Current Ratio above one, suggesting adequate ability to cover short-term obligations. This baseline highlights the natural liquidity strength of these firms, independent of their debt structures.

Looking at the Debt Ratio specifically, its coefficient is 0.16, suggesting that higher debt relative to assets is associated with a small increase in the Current Ratio. However, this relationship is not statistically significant, with a p-value of 0.39, and the confidence interval crosses zero. This means that while there is a positive direction, it cannot be reliably concluded that higher debt levels improve liquidity. The result implies that when airlines add moderate amounts of debt, it may not substantially weaken their ability to meet short-term liabilities, possibly because such debt is directed towards supporting operations and working capital.

In contrast, the Debt-to-Equity Ratio shows a negative and statistically significant relationship with the Current Ratio. The coefficient is -0.02, and the p-value is 0.00, confirming the robustness of the effect. The confidence interval is narrow and strictly negative, between -0.04 and -0.01, which strengthens the interpretation that higher leverage relative to equity consistently reduces liquidity. This indicates that when airlines rely heavily on debt in proportion to equity, their short-term financial flexibility diminishes, likely because a higher equity base is crucial for sustaining liquidity buffers.

Overall, the results reveal an important distinction: while the Debt Ratio in isolation does not strongly affect liquidity, the Debt-to-Equity Ratio significantly undermines it. This suggests that the structure of financing—whether assets are supported more by debt or equity—is critical to explaining how well airlines can cover immediate obligations. A higher reliance on equity enhances liquidity resilience, while aggressive debt financing relative to equity strains the Current Ratio. The analysis underlines that although debt can provide temporary funding support, excessive leverage relative to equity weakens financial stability and may compromise the company's ability to handle short-term commitments.

**Table 4 Regression Analysis of ROA with Debt and D/E Ratios**

Dep. Variable:	ROA		R-squared		0.14
Model	OLS		Adj. R-squared		0.09
Method	Least Squares		F-statistics		2.66
No. Observation	36		Prob (F-statistics)		0.08
Df Residuals	33		Df Model		2
	Coef	Std Err	t-stat	p-value	95% Con. Int.
Intercept	0.059	0.024	2.511	0.017	(0.011, 0.107)
Debt Ratio	-0.104	0.047	-2.235	0.032	(-0.199, -0.009)
D/E Ratio	0.000	0.002	0.070	0.945	(-0.003, 0.004)

The regression analysis of Return on Assets (ROA) with Debt Ratio and Debt-to-Equity Ratio provides insight into how leverage affects the profitability of assets in the airline sector. Based on the regression analysis, the regression equation for ROA is as follows:

$$ROA = 0.059 - 0.104 (\text{Debt Ratio}) + 0.000 (\text{D/E Ratio})$$

The model has an R-squared of 0.14 and an adjusted R-squared of 0.09, indicating that only about 9–14 percent of the variation in ROA is explained by the two debt measures. While this suggests that debt financing does play a role in asset profitability, it also implies that other operational or market factors carry stronger influence. The overall model's F-statistic of 2.66 with a p-value of 0.08 shows that it is not statistically significant at the conventional 5 percent level, though it does approach marginal significance at the 10 percent level. This means the combined explanatory power of debt measures for ROA is relatively weak.

The intercept is 0.059 and statistically significant with a p-value of 0.017, showing that in the absence of debt influences, companies achieve a modest positive return on assets. This baseline profitability highlights that airlines, even without debt financing, are able to generate returns through asset efficiency, although the returns are relatively low given the capital-intensive nature of the industry.

The Debt Ratio shows a coefficient of -0.104, and this result is statistically significant at the 5 percent level with a p-value of 0.032. The negative sign indicates that as the proportion of debt to total assets increases, ROA declines. The confidence interval is fully negative, ranging from -0.199 to -0.009, which reinforces the conclusion that higher debt burdens erode asset profitability. This relationship reflects the strain that debt places on airlines: interest expenses and repayment obligations eat into operating income, leaving less return relative to the asset base. It demonstrates that while debt may provide funding, in this context it has a damaging effect on profitability.

The Debt-to-Equity Ratio, on the other hand, has a coefficient very close to zero (0.000) with an extremely high p-value of 0.945, meaning the relationship is statistically insignificant. The wide confidence interval spanning both negative and positive values shows no consistent effect. This indicates that relative leverage, when expressed against equity rather than assets, does not significantly explain variation in ROA for these airlines. Essentially, the efficiency of assets is not meaningfully influenced by the ratio of debt to equity, suggesting that what matters more is the absolute level of debt relative to assets, not how it compares to equity capital.

Overall, the regression highlights that increasing the Debt Ratio significantly reduces profitability on assets, underlining the negative impact of high leverage in this industry. The Debt-to-Equity Ratio, however, does not show a meaningful influence, which suggests that ROA is more sensitive to the overall debt load on the balance sheet than to the capital structure mix between debt and equity. This finding supports the interpretation that airlines need to be cautious with debt financing, as higher asset-level leverage undermines profitability, while the distribution between equity and debt capital seems less relevant for asset efficiency.

**Table 5 Regression Analysis of ROE with Debt and D/E Ratios**

Dep. Variable:	ROE		R-squared		0.18
Model	OLS		Adj. R-squared		0.13
Method	Least Squares		F-statistics		3.55
No. Observation	36		Prob (F-statistics)		0.04
Df Residuals	33		Df Model		2
	Coef	Std Err	t-stat	p-value	95% Con. Int.
Intercept	0.77	0.29	2.68	0.01	(0.19, 1.35)
Debt Ratio	-1.30	0.57	-2.31	0.03	(-2.46, -0.15)
D/E Ratio	-0.04	0.02	-1.81	0.08	(-0.08, 0.00)

The regression analysis of Return on Equity (ROE) with Debt Ratio and Debt-to-Equity Ratio provides valuable insights into how leverage affects shareholder returns in the airline industry. The regression equation for ROE is:

$$ROE = 0.77 - 1.30 (\text{Debt Ratio}) - 0.04 (\text{D/E Ratio})$$

The model achieves an R-squared of 0.18 and an adjusted R-squared of 0.13, meaning that about 13–18 percent of the variation in ROE is explained by the debt measures. While not especially high, this explanatory power is meaningful in financial research, where many external factors affect performance. The F-statistic of 3.55 with a p-value of 0.04 indicates that the overall model is statistically significant at the 5 percent level, confirming that debt financing variables together contribute to explaining changes in ROE.

The intercept is positive at 0.77 and statistically significant, with a p-value of 0.01. This suggests that when the effects of debt are excluded, firms generate a baseline return on equity of 0.77. This demonstrates that airlines have the capacity to provide solid returns to shareholders in the absence of financial leverage pressures, relying instead on operational profitability and equity financing.

The Debt Ratio has a coefficient of -1.30, and this effect is statistically significant with a p-value of 0.03. The negative sign indicates that an increase in the proportion of debt relative to total assets reduces shareholder returns, and the confidence interval

between -2.46 and -0.15 reinforces the reliability of this finding. This shows that heavier reliance on debt erodes ROE, likely due to rising interest obligations and higher financial risks, which reduce the distributable profits available to equity holders. It also highlights that, in this industry, debt financing fails to provide the expected leverage benefit of amplifying returns; instead, it has a damaging effect on shareholder wealth.

The Debt-to-Equity Ratio has a coefficient of -0.04 and is not statistically significant at the 5 percent level, with a p-value of 0.08, although it approaches significance at the 10 percent threshold. The negative association suggests that higher leverage relative to equity tends to depress ROE, but the evidence is weaker compared to the Debt Ratio. The confidence interval, stretching from -0.08 to 0.00, narrowly includes zero, showing that the effect may not always hold consistently across firms. This points to a less stable relationship, though the direction of influence still suggests that excessive reliance on debt relative to equity is not beneficial for shareholder returns.

Taken together, the findings suggest that debt financing, particularly when measured by the Debt Ratio, exerts a clear negative influence on shareholder returns in the airline sector. This outcome diverges from traditional financial theory, where leverage can boost ROE, and instead shows that for capital-intensive, volatile industries such as airlines, debt undermines rather than enhances shareholder value. The weaker and borderline results for the Debt-to-Equity Ratio further reinforce that the sheer burden of debt relative to assets matters more than the specific capital structure mix. The interpretation overall is that while airlines can deliver positive returns on equity when not excessively reliant on borrowing, heavy debt financing reduces profitability and increases risks, eroding the value provided to shareholders.

## **5.2 Discussion of Results**

This discussion chapter examines the results of the present study on the impact of debt financing on the financial performance of airline companies listed on the London Stock Exchange. To provide depth and context, the findings are interpreted in relation to prior research conducted in other countries and industries, as well as through the lens of established academic theories such as the Trade-off Theory, Pecking Order Theory, and Modigliani–Miller propositions.

In order to situate the current results within this broader body of knowledge, a summary table has been developed. This table consolidates relevant studies by outlining the authors, article titles, methodologies employed, and the main findings. Given the limited academic research on debt financing and firm performance within the airline industry, insights from other sectors have been incorporated to provide a richer basis for comparison and contrast. Nevertheless, the inclusion of this comparative overview enables a structured analysis of how the current findings align with, contradict, or extend existing evidence on the relationship between debt financing and firm performance, both within the aviation sector and beyond.

### 5.2.1 Comparison with the Existing Literature

*Table 6 Summary of the Existing Literature (N = 50)*

Index	Author Name (Year)	Title	Methodology	Findings
1	Alsulami (2025)	The Impact of Financial Leverage on Return and Risk	Analysis of South Asian airline companies via financial ratio analysis from 2011 to 2022, using GARCH and PARCH models.	Liquidity ratios have a positive impact on financial performance, with significant evidence ( $p < 0.05$ ). Effective liquidity management and strategic debt implementation improve financial outcomes.
2	Lidovolo, Atieno (2023)	The Effect of Long-Term Debt Financing on the Profitability of Commercial Airlines in Kenya	Cross-sectional design using secondary data from audited financial statements of Kenyan airlines. Descriptive and inferential statistics, including Hausman test and random effects models.	Long-term debt financing has a negative and statistically significant effect on profitability (p-value 0.038).
3	Aman, Altass (2023)	The Impact of Capital Structure on Airline Performance	Data from the financial statements of Pakistan International Airline (2004–2020), using regression and correlation analysis.	Debt to asset ratio (DTA) has a significant negative relationship with ROA; size has a significant positive relationship with ROE.



4	Parvizomran, Elliot, Bergqvist (2024)	Financing Policies and Capital Structures in the Road Freight Transport Sector	Agent-based model inspired by Sweden's freight sector. Simulated strategies for fleet replacement while considering financial health and balance sheets.	Limited financing options hinder the integration of electric trucks. Debt financing raises credit risks despite incentives.
5	Mazanec (2023)	Capital Structure and Debt Ratio Determinants in the Transport Sector	Multiple linear regression on data from 3828 SMEs in Central Europe, including the Czech Republic, Hungary, Poland, and Slovakia.	Tangibility, return on assets, and current ratio reduce debt ratio, supporting the Pecking Order Theory.
6	Borodavko <i>et al.</i> (2020)	Financial Risk Management in the Russian Transport Industry	Quantitative indicators and comparative analysis across the railway, airline, and shipping industries.	Railway companies face low financial risks, airlines have high risks, and shipping companies face medium-high risks due to debt overuse.
7	Imanov, İmamoğlu (2025)	Capital Structure in the Airline Industry: Analyzing Debt and Equity Financing	Analysis using theoretical frameworks (Modigliani-Miller, Trade-off Theory, Pecking Order Theory) and empirical data.	Larger airlines with tangible assets use more debt; profitable and growing airlines prefer equity financing. Mixed results on debt-equity ratio impact.

8	Drobetz <i>et al.</i> (2013)	Debt Capital and Capital Structure Decisions in the Shipping Industry	Sample of 115 exchange-listed shipping companies, analyzing capital structure dynamics and adjustment to target ratios.	Shipping companies exhibit higher leverage ratios, and leverage is counter-cyclical. Adjustment speed is higher than G7 benchmarks.
9	Özcan (2019)	The Impact of Capital Structure on the Financial Performance and Market Valuation of Airport Companies	Unbalanced panel data sample of 29 publicly traded airports from 20 countries (1989–2017).	Higher total and long-term leverage tend to decrease return on assets (ROA), but are positively associated with return on equity (ROE).
10	Gritta, Freed, Chow (2000)	Financial Leverage and Airline Profitability	Analysis of three major U.S. airlines (Southwest, Delta, USAir), focusing on the impact of operating and financial leverage on profitability.	High operating and financial leverage magnify profitability, but excessive debt creates potential risks even during prosperous times.
11	Lin (2024)	Debt Management in the Aviation Industry: An Analysis of Debt Levels and Firm Situations	Quantitative analysis of sample firms in the aviation industry, utilizing various indicators to assess debt management ability.	Differentiation in debt levels results from industry features, firm situations, and operating and investment activities.
12	Abbas, Aziz and Khan (2020)	How Does Debt Financing Affect Financial Performance? A Study	SPSS analysis using data from 3 transport companies between 2008 and 2018	Negative relationship between debt financing and financial performance of airlines, with

		of Transport Companies Listed in Pakistan		higher debt leading to decreased performance.
13	Abubakar, Anyonje (2025)	Financial Leverage and Corporate Financial Performance: A Comprehensive Review	Systematic review analyzing the effect of debt financing on ROA, ROE, and EPS across industries.	Moderate leverage enhances firm value and shareholder returns, while excessive debt increases financial distress.
14	Adekoya, Oladimeji (2023)	The Impact of Capital Structure on the Profitability of Financial Institutions Listed on the Nigerian Exchange Group	Panel data methodology using secondary data from selected Nigerian banks, insurance companies, and microfinance institutions (2013–2022)	Moderate leverage enhances profitability, while excessive debt burdens diminish financial performance.
15	Ali and Shaik (2022)	Effect of Debt Financing on Firm Performance: A Study on Energy Sector of Saudi Arabia	Data from yearly reports of Saudi Arabian oil companies (2012-2019) analyzed using panel data regression	Debt financing negatively affects financial performance, even after considering interaction variables.
16	Al-Janabi (2022)	The Relationship Between Financial Leverage and Profitability Indicators: Analytical Study for a Sample of Iraqi Industrial Companies for the Period From 2014-2018	The study uses a sample of 10 firms listed on the Iraqi Stock Exchange, spanning 2014-2018. Descriptive analytical methods with multiple regression.	Positive effect of financial leverage if the rate of return for profitability indicators is higher than the cost of debt.

17	Al-Qudah (2017)	The Relationship between Capital Structure and Financial Performance in the Companies Listed in Abu Dhabi Securities Exchange	Statistical analysis using SPSS for 48% of companies listed on ADX from 2008 to 2015	A positive relationship between capital structure (debt ratio) and profitability (ROA), but a negative relationship with ROE.
18	Ardiyanto (2020)	Debt Financing Options and Financial Performance	Multiple linear regression analysis on 11 food and beverage companies listed on the Indonesian stock exchange (2014-2018)	Short-term debt and long-term debt influence ROA and ROE. Short-term debt significantly impacts ROE; long-term debt does not significantly affect ROE.
19	Banal-Estanol, Siciliani, Yoon (2022)	Competition, Profitability, and Financial Leverage	Investigates U.S. listed non-financial corporations considering product similarity. The study employed a model considering product competition's effect on profitability and leverage.	In markets with high price-cost mark-ups and product similarity, the relationship between profitability and leverage is negative.
20	Das and Swain (2018)	Influence of Capital Structure on Financial Performance	Secondary data from 50 top manufacturing companies and regression model.	A significant relationship between capital structure and profitability, with capital structure having a significant impact on financial performance.

21	Eleje, Okechukwu and Chikanele (2020)	Debt Finance and Corporate Performance: Firm Level Empirical Evaluation	Time series analysis using firm-level data from National Salt Corporation of Nigeria (NASCON) Plc (2007-2018)	Long-term debt slightly enhances corporate performance, while short-term debt does not significantly impact ROA or ROE.
22	Eleje, Okechukwu, Chikanele (2020)	Debt Finance and Corporate Performance: Firm Level Empirical Evaluation	Time-series analysis of data from the National Salt Corporation of Nigeria (NASCON) Plc, 2007-2018.	Debt financing, both short-term and long-term, did not significantly impact ROA and ROE, though long-tenured debt had a slight positive effect on performance.
23	Enow (2025)	Capital Structure and a Firm's Profitability: Is There Any Relationship?	Lilliefors's, Kolmogorov Smirnov, and Chi-square tests; a review of 23 peer-reviewed journal articles	Capital structure is not a significant determinant of profitability, suggesting that profitability is independent of capital structure.
24	Ezeaku, Ageme, Eze (2017)	Dynamics of Financial Leverage and Firm's Profitability: Evidence from Nigerian Deposit Money Banks	Panel data from 14 Nigerian deposit money banks (2000-2014), analyzed using descriptive statistics and panel regression analysis.	Financial leverage negatively impacts profitability; size and liquidity have a positive effect.

25	Ghardallou (2022)	Capital Structure Decisions and Corporate Performance: Does Firm's Profitability Matter?	Quantile regression methodology on 120 non-financial companies listed on the Tadawul stock exchange (2017–2020).	Debt-to-equity ratio hampers performance, while equity financing increases profitability.
26	Hamad (2024)	The effect of capital structure on firm profitability	A review of empirical investigations from 2015 to 2020.	The results are inconclusive, with some studies showing a positive relationship and others a negative one.
27	Jayaprakash, Ramya (2025)	A Study on Financial Leverage and Its Effect on Profitability of Rane (Madras) Limited	Analyzes data from 2019 to 2024, focusing on debt ratio, ROA, and ROE to explore the effect of debt financing on profitability.	Increasing debt failed to consistently improve profitability, showing significant volatility in ROA and ROE.
28	Kibunja and Fatoki (2020)	Effect Of Debt Financing on Financial Performance of Listed Non-Financial Firms in Kenya	Panel data regression using financial statements of 23 firms listed on the Nairobi Securities Exchange (2013-2017)	Medium-term debt negatively affects ROE, while long-term debt had a positive but statistically insignificant relationship.
29	Kirimi, Simiyu and Dennis (2017)	Effect of Debt Finance on Financial Performance of Savings and Credit Cooperative	Causal research design and census survey using secondary data from financial statements of Sacco's (8 years of data)	Positive relationship between debt financing and ROE. Interest rate, loan tenure, and debt-equity ratio affect ROE.

		Societies in Maara Sub-county, Tharaka Nithi County, Kenya		
30	Liu, Xia and Yang (2017)	Financing constraints and the use of performance-sensitive debt	Examines how performance-sensitive debt (PSD) impacts investment policy, capital structure, and agency costs in firms facing financing constraints	PSD reduces financing constraints and minimizes firm value losses due to financing distortions.
31	Mazikana (2021)	The impact of debt financing on financial performance of mining firms in Harare, Zimbabwe	Survey of mining firms in Harare, Zimbabwe, using financial performance data analysis	Debt financing can benefit financial performance, but misuse of funds may lead to losses.
32	Mwazito and Mwanzia (2023)	Effect of Debt Financing on Financial Performance of Selected State Corporations in Kenya	Descriptive survey using questionnaires and secondary data from 136 state-owned corporations	Strong positive relationship between debt financing and financial performance, weak for bonds, debentures, bank loans, and factoring.
33	Naomi (2023)	Debt Financing and Financial Performance of Manufacturing Firms in Kenya	Literature review and empirical analysis of debt financing conditions, loan duration, leverage level, and interest coverage ratio	The relationship between debt financing and financial performance in Kenyan manufacturing firms remains complex.

34	Nyamita (2014)	Factors influencing debt financing and its effects on financial performance of state corporations in Kenya	Descriptive and inferential statistics with primary and secondary data from 50 state-owned corporations in Kenya	Debt financing is inversely related to financial performance, influenced by factors like profitability and asset tangibility.
35	Nyamita, Dorasamy and Garbharran (2015)	How Debt Financing Decisions Relate With Financial Performance Of State-Owned Corporations In Kenya	Panel data regression analysis using financial performance ratios (ROA, ROI, ROE)	Debt financing is inversely related to financial performance of state-owned corporations in Kenya.
36	Obuya (2017)	Debt Financing Option and Financial Performance of Micro and Small Enterprises: A Critical Literature Review	Literature review of empirical and theoretical studies	Mixed findings on the impact of debt financing on performance; future research should consider power balance between business owners and financiers.
37	Okanda, Zhang, Sarfo and Amankwah (2025)	Exploring the Nexus between Debt Financing and Firm Performance: A Robustness Analysis Using Instrumental Variables	Uses Generalized Two-Stage Least Squares (G2SLS) and instrumental variable techniques to address endogeneity and collinearity	Long-term debt and total debt have significant effects on firm performance, with mixed relationships between debt financing and performance outcomes.
38	Olang (2017)	Effect of Financial Leverage on Profitability of Firms Listed in the Nairobi Securities Exchange	Causal research design with 66 listed firms, purposively sampling 30 firms. Descriptive and inferential statistics,	Firm size significantly affects profitability, while liquidity and growth opportunities are not statistically significant.



			including regression, were used to analyze the data.	
39	Peace and Onyenania (2025)	Capital Structure's Impact on Financial Performance in A Selected Bank in Nigeria	Quantitative methods, using secondary data from 10 Nigerian firms (2015–2020) and regression analysis.	Capital structure has a complex but significant effect on ROA and ROCE.
40	Peng (2014)	Analysis of Effects of the Financial Cost on Corporate Debt Financing, Role of Governance and Performance Responding	Theoretical analysis focusing on the role of governance and financial costs in corporate debt financing	Debt financing strategies affect business performance through financial costs and governance.
41	Rahman, Saima, Jahan (2020)	The Impact of Financial Leverage on Firm's Profitability: An Empirical Evidence from Listed Textile Firms of Bangladesh	A sample of 22 textile firms listed on DSE, using Pooled OLS, Fixed Effect, and GMM models.	A significant negative relationship between financial leverage and profitability.
42	Rohilla and Sharma (2023)	IMPACT OF DEBT FINANCING ON FINANCIAL PERFORMANCE OF FIRMS: A Systematic Literature Review	Systematic literature review from Web of Science and SCOPUS database (1985-2022)	Long-term debt, total debt, and debt-to-equity ratio negatively impact firm performance, supporting "pecking-order" theory.
43	Sarıtaş (2000)	The Impact of Financial Leverage on Return and Risk	Focuses on the relationship between financial leverage,	Financial leverage increases profitability and risk. The effect

			ROE, and ROA. Examines how debt influences profitability, particularly in relation to economic conditions and risk.	of leverage is positive in good economic years but negative in bad years.
44	Souza (2018)	Impact of Capital Structure on Profitability	Uses Nifty50 companies' data from 2013 to 2017. Panel Data Regression analysis through panel econometric techniques.	Capital structure has a weak negative relationship with profitability.
45	Swain, Das (2017)	Impact of Capital Structure on Financial Performance and its Determinants	Secondary data from 50 manufacturing companies; regression model used.	A significant relationship between capital structure and profitability, and capital structure significantly impacts financial performance.
46	Tai and Li (2020)	An Empirical Study on Economic Model of the Influence of Debt Financing Structure on the Financial Performance of Listed Companies	Empirical analysis of China's mining industry with the development of an economic model	The relationship between debt financing structure and financial performance of listed companies is complex.
47	Tauseef, Lohano and Khan (2015)	Effect of Debt Financing on Corporate Financial Performance: Evidence from Textile Firms in Pakistan	Panel data from 95 textile companies in Pakistan (2002-2008) to examine the relationship between debt-to-asset ratio and return on equity	Nonlinear relationship between ROE and debt-to-asset ratio, with the optimal debt level being 56%.

48	Xu and Gao (2017)	Research about the Impact of Debt Financing on Real Estate Listed Corporations' Financial Performance	Multiple linear regression model on debt financing and corporate performance in the real estate industry	Negative correlation between corporate performance and asset-liability ratio.
49	Zelalem (2020)	The Impact of Financial Leverage on the Performance of Commercial Banks: Evidence from Selected Commercial Banks in Ethiopia	Longitudinal study of 5 commercial banks in Ethiopia, analyzing debt ratios, ROA, and ROE from 2008-2017.	Debt Equity Ratio (DER) and Interest Coverage Ratio (ICR) have a positive significant effect on profitability, while Debt Ratio (DR) has an insignificant negative effect.
50	Zhu and Pan (2009)	Debt Financing, Investment and Corporate Performance	Simultaneous equations and panel data from 333 Chinese manufacturing companies (2001-2007)	Nonlinear inverse U-shaped relationship between debt financing, investment, and corporate performance.

### **5.3 The Influence of Debt Financing on Liquidity: Current Ratio in the Context of Theory and Prior Research**

The regression results of this study show that the current ratio, used as the dependent variable, is weakly and positively associated with the debt ratio (coefficient = 0.16,  $p = 0.39$ ), though the relationship is not statistically significant. By contrast, the debt-to-equity (D/E) ratio has a strong and statistically significant negative association with the current ratio (coefficient =  $-0.02$ ,  $p < 0.01$ ). This suggests that while the overall level of debt does not materially alter the liquidity position of London-listed airlines, a higher reliance on debt relative to equity is linked with weaker liquidity. In other words, firms that finance themselves more heavily through equity maintain stronger short-term liquidity buffers compared to those that rely more on debt.

These results can be interpreted in the context of key theoretical perspectives. According to the Pecking Order Theory, firms prefer internal financing first, followed by debt, and only turn to equity as a last resort. The significant negative effect of the D/E ratio on current ratio observed here appears consistent with the idea that firms with greater internal liquidity avoid excessive reliance on debt, whereas those more dependent on debt financing experience liquidity constraints. At the same time, the findings partially align with the Trade-off Theory, which suggests that firms balance the tax advantages of debt with the potential costs of financial distress. The evidence that higher debt relative to equity weakens liquidity highlights the distress side of this trade-off, especially for capital-intensive industries such as airlines, where maintaining sufficient working capital is essential for operations. In contrast, the Modigliani–Miller propositions assume that capital structure should be irrelevant in perfect markets; however, the present results, together with the comparative evidence, reinforce the importance of capital structure decisions for liquidity in practice, particularly in industries exposed to volatility and high fixed costs.

When compared with earlier studies, the findings show both consistency and divergence. Mazanec (2023), examining SMEs in Central Europe, reported that firms with stronger liquidity positions carried lower debt ratios, a result that mirrors the significant negative relationship found in the present study between the current ratio and the D/E ratio. Similarly, Ezeaku et al. (2017), in the context of Nigerian banks, highlighted that liquidity enhanced profitability, further supporting the argument that debt burdens undermine liquidity and, by extension, financial performance. However,

Alsulami (2025), in an analysis of South Asian airlines, found that liquidity ratios had a significant positive effect on financial performance, suggesting a more complementary relationship between debt and liquidity in that setting. This contrasts with the present findings, where liquidity is eroded by higher leverage. Additionally, the mixed evidence reported by Nyamita (2014) and Nyamita, Dorasamy and Garbharran (2015) on Kenyan state-owned corporations indicates that liquidity and debt interact differently depending on ownership structures and market environments.

Taken together, the evidence suggests that the role of debt in shaping liquidity is highly context-dependent. For airlines listed on the London Stock Exchange, the results underline that it is not the absolute level of debt but its composition relative to equity that meaningfully determines liquidity outcomes. This provides empirical support for the Pecking Order Theory while also highlighting the relevance of the Trade-off Theory in balancing debt benefits against liquidity risks. More broadly, the findings demonstrate that Modigliani–Miller’s assumptions of neutrality do not hold in practice for the airline sector, where high capital requirements, cyclical revenues, and exposure to external shocks make liquidity management critical.

#### **5.4 The Effect of Debt Financing on Profitability: ROA in Light of Theory and Comparative Evidence**

The regression analysis shows that return on assets (ROA), used as the dependent variable, is significantly and negatively associated with the debt ratio (coefficient =  $-0.104$ ,  $p = 0.032$ ). This indicates that higher levels of debt reduce the profitability of airlines listed on the London Stock Exchange when measured against total assets. By contrast, the debt-to-equity (D/E) ratio has no statistically significant effect on ROA (coefficient =  $0.000$ ,  $p = 0.945$ ), suggesting that the composition of financing between debt and equity does not directly influence asset-based profitability in this context.

These results can be interpreted through the lens of established capital structure theories. The negative effect of debt ratio on ROA aligns with the Trade-off Theory, which emphasises the costs of financial distress associated with higher leverage. For airlines, a sector characterised by high fixed costs and vulnerability to external shocks such as fuel price fluctuations and geopolitical events, the distress costs appear to outweigh the tax-shield benefits of debt, leading to weaker returns on assets. The findings also resonate with the Pecking Order Theory, as firms facing profitability

constraints are likely to rely less on external debt, given that increased leverage erodes asset efficiency. The Modigliani–Miller framework, which proposes capital structure irrelevance in perfect markets, is again challenged, as the observed negative effect of debt on asset profitability underscores the imperfections of real-world capital markets where leverage carries measurable risks.

When compared with previous research, the present results find significant support. Aman and Altass (2023), using data from Pakistan International Airlines, reported that the debt-to-asset ratio had a significant negative relationship with ROA, mirroring the current study's findings. Özcan (2019), analysing 29 publicly traded airports, also found that higher leverage tended to decrease ROA, which reinforces the robustness of this relationship in the aviation sector. Similarly, Rahman, Saima and Jahan (2020), examining Bangladeshi textile firms, observed a negative relationship between financial leverage and profitability, suggesting the consistency of this effect beyond aviation. Conversely, studies such as Al-Qudah (2017), which found a positive relationship between debt ratio and ROA among UAE-listed companies, present a different perspective, possibly reflecting variations in regulatory environments, market maturity, or sector-specific financial structures.

Overall, the evidence underscores that in the case of London-listed airlines, higher debt levels undermine the efficiency with which assets generate returns. This reinforces the argument that the capital-intensive nature of the airline industry magnifies the risks of over-leverage, lending greater weight to the Trade-off Theory's emphasis on balancing debt benefits with potential financial distress. It also confirms that in practice, unlike the assumptions of Modigliani–Miller, capital structure choices do materially affect firm outcomes, with debt emerging as a key determinant of asset-based profitability.

## **5.5 The Impact of Debt Financing on Shareholder Profitability: ROE in the Context of Theory and Prior Evidence**

The regression results demonstrate that return on equity (ROE), used as the dependent variable, is significantly and negatively associated with the debt ratio (coefficient =  $-1.30$ ,  $p = 0.03$ ). This indicates that higher debt levels strongly reduce shareholder profitability in airlines listed on the London Stock Exchange. In addition, the debt-to-equity (D/E) ratio shows a negative but weaker relationship with ROE

(coefficient =  $-0.04$ ,  $p = 0.08$ ), which is marginally significant at the 10% level. Together, these results highlight that both absolute debt levels and the relative balance of debt to equity exert downward pressure on returns to equity holders, though the effect of overall leverage is more pronounced.

Theoretical perspectives help to interpret these results. The negative relationship between debt and ROE is consistent with the Trade-off Theory, which suggests that while debt provides tax benefits, excessive borrowing increases the probability of financial distress, thereby eroding shareholder value. In capital-intensive sectors such as airlines, where revenue volatility and high fixed costs amplify risk, the costs of debt appear to outweigh its advantages. From the Pecking Order Theory perspective, firms with stronger internal resources would avoid debt precisely because of its adverse effects on equity returns, an explanation supported by the significant and negative coefficients in this study. Finally, the Modigliani–Miller propositions, which predict capital structure irrelevance under perfect market assumptions, are challenged once more, as the findings clearly indicate that financing choices impact the profitability available to equity holders.

The findings resonate with prior research. Aman and Altass (2023) observed that firm size had a positive effect on ROE, but that debt-to-asset ratios had adverse consequences, a pattern that supports the present study's evidence of leverage weakening equity returns. Özcan (2019), in a cross-country study of airports, similarly found that higher leverage reduced ROA but increased ROE, although the present analysis of airlines shows a more consistent negative impact on both measures of profitability. Gritta, Freed and Chow (2000), in their study of U.S. airlines, highlighted that high financial leverage can magnify profitability but warned of risks in downturns; the present results suggest that for London-listed airlines, the risk element dominates, producing an overall negative impact on equity returns. Al-Qudah (2017), however, reported a positive association between debt ratios and ROA in UAE firms, a divergence that underscores the influence of local institutional, economic, and regulatory conditions on capital structure outcomes.

Taken together, these results suggest that in the case of London-listed airlines, debt financing exerts a strong and adverse effect on returns to equity holders, with both debt ratios and debt-to-equity ratios undermining shareholder value. This reinforces

the relevance of the Trade-off Theory by showing that the potential benefits of leverage are outweighed by the risks of financial distress in the airline industry. The findings also extend the Pecking Order Theory by demonstrating that excessive reliance on external financing compromises equity returns, particularly in industries where stable profitability is difficult to sustain. For this sector, the results challenge the neutrality of capital structure suggested by Modigliani–Miller, instead affirming that financing decisions are central to shareholder outcomes.

## **5.6 Chapter Summary**

This chapter has discussed the empirical findings of the study on the impact of debt financing on the financial performance of airline companies listed on the London Stock Exchange in relation to established theories and previous research. The results revealed that the current ratio was negatively and significantly influenced by the debt-to-equity ratio, supporting the Pecking Order Theory, which suggests that firms with stronger liquidity rely less on debt. For profitability, debt ratios had a significant negative effect on both ROA and ROE, while the debt-to-equity ratio showed no significant effect on ROA and only a weak negative effect on ROE. These findings align with the Trade-off Theory, highlighting the adverse impact of excessive leverage in capital-intensive and volatile industries such as airlines, and they challenge the assumptions of Modigliani–Miller’s capital structure irrelevance by demonstrating that financing choices materially affect both liquidity and profitability. Comparisons with prior studies across different countries and industries confirmed broad consistency with the negative role of debt on firm performance, while also illustrating that contextual differences, including market maturity and industry dynamics, shape the debt–performance relationship. Overall, the chapter underscores that careful management of debt levels and capital structure is essential for maintaining liquidity and safeguarding profitability in the airline sector.



## **CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS**

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### **6.1 Summary of Main Findings**

This study investigated the impact of debt financing on the financial performance of airline companies listed on the London Stock Exchange, focusing on liquidity (measured through the current ratio) and profitability (measured through ROA and ROE). The regression analysis revealed three key findings. First, the current ratio was negatively and significantly influenced by the debt-to-equity ratio, suggesting that airlines with higher reliance on equity maintain stronger liquidity positions. Second, profitability measured by ROA was significantly and negatively associated with debt ratio, while D/E ratio had no measurable effect, highlighting that higher leverage erodes asset efficiency. Third, profitability measured by ROE was strongly and negatively affected by debt ratio, with the D/E ratio exerting a weaker but still adverse influence. Taken together, the findings point to the conclusion that excessive debt financing undermines both liquidity and profitability, supporting the Trade-off Theory's emphasis on balancing debt benefits against distress costs and the Pecking Order Theory's argument that firms with stronger internal resources avoid debt reliance. The evidence also challenges the Modigliani–Miller irrelevance proposition, showing that capital structure choices significantly affect financial outcomes in practice.

### **6.2 Conclusion Based on the Research Questions**

The first research question asked whether debt financing influences the liquidity of airlines listed on the London Stock Exchange. The results confirm that it does, with the debt-to-equity ratio exerting a significant negative effect on the current ratio, suggesting that firms more reliant on equity financing are able to sustain higher liquidity levels. The second research question considered whether debt financing affects profitability in terms of ROA. The analysis shows a significant negative relationship between debt ratio and ROA, indicating that increased leverage reduces the efficiency of asset utilisation. The third research question examined the relationship between debt financing and ROE. The findings demonstrate that debt ratio has a strong and significant negative effect on ROE, while the debt-to-equity ratio exerts a weaker negative effect at the 10% level, implying that debt undermines shareholder returns. Overall, the study concludes that for London-listed airlines, higher

debt levels are detrimental to both liquidity and profitability, with adverse consequences for operational stability and shareholder value.

### **6.3 Recommendations (Practical and Theoretical)**

From a practical perspective, the findings suggest that airline managers should exercise caution in the use of debt financing. While debt may offer tax benefits, excessive leverage reduces liquidity and profitability, thereby increasing financial vulnerability in a capital-intensive and volatile industry. Managers should focus on balancing debt and equity, ensuring that financing decisions safeguard short-term liquidity while supporting sustainable returns for shareholders. Equity financing, retained earnings, or alternative funding such as leasing arrangements may be more appropriate mechanisms to mitigate the risks associated with heavy debt reliance. Regulators and investors should also consider debt levels as a critical factor when assessing the financial health and resilience of airlines.

From a theoretical standpoint, the study provides further empirical support for both the Trade-off Theory and the Pecking Order Theory, demonstrating their applicability to the airline industry. The negative effects of debt on ROA and ROE highlight the trade-off between tax shields and distress costs, while the inverse relationship between current ratio and debt-to-equity ratio reinforces the preference for internal financing. The study also adds to the body of evidence that challenges the Modigliani–Miller irrelevance theorem by showing that capital structure has significant and measurable effects on firm outcomes in real-world contexts characterised by risk, market imperfections, and industry-specific constraints.

### **6.4 Limitations of the Research**

This study is subject to several limitations that should be acknowledged. First, the sample is limited to airline companies listed on the London Stock Exchange, which may restrict the generalisability of the results to airlines operating in other regions or to privately held firms. Second, the study relies on secondary financial data, which, although reliable, may not capture qualitative factors such as managerial strategies, market competition, or regulatory changes that also influence financial performance. Third, the analysis is limited to three financial indicators (current ratio, ROA, and ROE), which, while widely used, do not fully capture all dimensions of financial performance. Fourth, the time frame and dataset constraints may have influenced the robustness of

the regression models, particularly in an industry subject to cyclical volatility, external shocks, and sudden changes in global demand.

## **6.5 Recommendations for Future Work**

Future research could build on this study by expanding the sample to include airlines listed on other international stock exchanges, thereby enabling cross-country comparisons and improving generalisability. Researchers may also consider integrating additional performance measures, such as return on investment (ROI), earnings per share (EPS), or market-based indicators, to capture a broader understanding of financial outcomes. Furthermore, qualitative research examining management perspectives on financing decisions could complement quantitative findings and provide deeper insight into the motivations behind debt usage. Comparative studies across industries with different capital structures, such as shipping, banking, or manufacturing, would also enrich the understanding of how sector-specific factors shape the debt–performance relationship. Finally, longitudinal studies that capture the effects of external shocks, such as economic crises or global pandemics, would provide valuable insights into how debt financing interacts with industry resilience and long-term financial stability.

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## APPENDICES

### 8.1.1 Appendix A: Raw Data Extracted from Annual Reports and Investing.com

Company	Date	Total Current Assets (B)	Total Current Liabilities (B)	Return on Assets	Return on Equity	Total Liabilities (B)	Total Equity (B)	Total Debt (B)	Total Assets (B)
easyJet plc	9/30/2016	1.869	2.034	0.085	0.177	3.617	3.492	0.980	7.109
easyJet plc	9/30/2017	2.323	2.237	0.053	0.111	4.246	3.754	1.312	8.000
easyJet plc	9/30/2018	2.605	2.685	0.055	0.119	4.900	4.213	1.273	9.113
easyJet plc	9/30/2019	2.606	3.281	0.046	0.112	6.367	3.670	2.347	10.037
easyJet plc	9/30/2020	3.307	4.937	-0.130	-0.442	8.483	2.450	4.440	10.933
easyJet plc	9/30/2021	5.612	3.607	-0.094	-0.378	9.613	3.556	6.036	13.169
easyJet plc	9/30/2022	5.504	4.107	-0.017	-0.065	8.845	2.829	4.813	11.674
easyJet plc	9/30/2023	5.039	5.056	0.032	0.122	8.606	3.400	3.543	12.006
easyJet plc	9/30/2024	6.077	5.978	0.043	0.157	10.779	3.975	4.432	14.754
IAG	12/31/2016	10.299	9.826	0.070	0.349	22.849	5.961	8.962	28.810
IAG	12/31/2017	12.228	12.155	0.074	0.319	24.354	8.318	8.795	32.672
IAG	12/31/2018	11.563	12.659	0.105	0.424	24.417	7.698	8.602	32.115
IAG	12/31/2019	12.706	14.299	0.054	0.253	32.105	7.660	15.989	39.765
IAG	12/31/2020	9.577	14.068	-0.211	-1.644	35.067	1.967	19.153	37.034
IAG	12/31/2021	12.009	15.113	-0.091	-2.388	38.197	0.963	22.320	39.160
IAG	12/31/2022	14.181	17.840	0.012	0.301	39.920	2.165	21.398	42.085
IAG	12/31/2023	12.090	19.546	0.069	1.002	37.980	3.619	17.754	41.599
IAG	12/31/2024	15.732	20.057	0.067	0.578	38.981	6.398	17.969	45.379
WIZZ	3/31/2017	1.017	553.800	0.162	0.300	793.600	1.016	39.665	794.616
WIZZ	3/31/2018	1.517	811.200	0.143	0.251	1.109	1.530	2.066	2.639
WIZZ	3/31/2019	1.873	1.279	0.040	0.100	3.072	1.353	2.248	4.425

WIZZ	3/31/2020	1.735	1.459	0.068	0.230	3.442	1.361	3.678	4.803
WIZZ	3/31/2021	1.943	1.435	-0.127	-0.539	4.477	1.059	5.634	5.536
WIZZ	3/31/2022	1.740	1.520	-0.127	-1.101	8.019	-388.200	5.751	-380.181
WIZZ	3/31/2024	2.780	3.211	0.047	5.023	9.225	157.200	6.766	166.425
WIZZ	3/31/2025	2.830	4.081	0.023	0.924	10.081	343.100	7.163	353.181
Jet2	3/31/2016	1.392	1.508	0.074	0.373	1.569	0.459	0.131	2.028
Jet2	3/31/2017	1.845	1.750	0.041	0.205	2.335	0.541	0.652	2.876
Jet2	3/31/2018	1.870	1.595	0.045	0.227	2.712	0.721	1.132	3.433
Jet2	3/31/2019	2.143	1.844	0.050	0.256	3.358	0.753	1.576	4.111
Jet2	3/31/2020	2.319	2.025	0.035	0.191	3.417	0.788	1.440	4.205
Jet2	3/31/2021	2.119	1.163	-0.087	-0.339	2.631	1.329	1.817	3.960
Jet2	3/31/2022	3.427	2.209	-0.092	-0.339	4.068	-0.388	5.751	3.680
Jet2	3/31/2023	3.691	2.784	0.068	0.305	4.335	1.249	1.178	5.584
Jet2	3/31/2024	4.635	3.411	0.079	0.330	5.251	1.778	1.696	7.029
Jet2	3/31/2025	4.789	3.983	0.078	0.296	5.552	2.082	1.837	7.634

### 8.1.2 Appendix B: Calculated Variables

Company	Year	Debt Ratio	D/E Ratio	Current Ratio	ROA	ROE
easyJet plc	2016	0.138	0.281	0.92	0.085	0.177
easyJet plc	2017	0.164	0.349	1.04	0.053	0.111
easyJet plc	2018	0.140	0.302	0.97	0.055	0.119
easyJet plc	2019	0.234	0.640	0.79	0.046	0.112
easyJet plc	2020	0.406	1.812	0.67	-0.130	-0.442
easyJet plc	2021	0.458	1.697	1.56	-0.094	-0.378
easyJet plc	2022	0.412	1.701	1.34	-0.017	-0.065
easyJet plc	2023	0.295	1.042	1.00	0.032	0.122
easyJet plc	2024	0.300	1.115	1.02	0.043	0.157
IAG	2016	0.311	1.503	1.05	0.070	0.349
IAG	2017	0.269	1.057	1.01	0.074	0.319
IAG	2018	0.268	1.117	0.91	0.105	0.424
IAG	2019	0.402	2.087	0.89	0.054	0.253
IAG	2020	0.517	9.737	0.68	-0.211	-1.644
IAG	2021	0.570	23.178	0.79	-0.091	-2.388
IAG	2022	0.508	9.884	0.79	0.012	0.301
IAG	2023	0.427	4.906	0.62	0.069	1.002
IAG	2024	0.396	2.809	0.78	0.067	0.578
WIZZ	2017	0.050	39.040	0.00	0.162	0.300
WIZZ	2018	0.783	1.350	0.00	0.143	0.251
WIZZ	2019	0.508	1.661	1.46	0.040	0.100
WIZZ	2020	0.766	2.702	1.19	0.068	0.230
WIZZ	2021	1.018	5.320	1.35	-0.127	-0.539
WIZZ	2022	-0.015	-0.015	1.14	-0.127	-1.101

WIZZ	2024	0.041	0.043	0.87	0.047	5.023
WIZZ	2025	0.020	0.021	0.69	0.023	0.924
Jet2	2016	0.065	0.285	0.92	0.074	0.373
Jet2	2017	0.227	1.207	1.05	0.041	0.205
Jet2	2018	0.330	1.570	1.17	0.045	0.227
Jet2	2019	0.383	2.094	1.16	0.050	0.256
Jet2	2020	0.342	1.826	1.15	0.035	0.191
Jet2	2021	0.459	1.367	1.82	-0.087	-0.339
Jet2	2022	1.563	-14.815	1.55	-0.092	-0.339
Jet2	2023	0.211	0.943	1.33	0.068	0.305
Jet2	2024	0.241	0.954	1.36	0.079	0.330
Jet2	2025	0.241	0.882	1.20	0.078	0.296