

FINANCIAL RISK AND PERFORMANCE ANALYSIS OF AIRLINE BUSINESS MODELS IN THAILAND DURING THE POST-COVID-19 PERIOD (2021-2025)

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Abstract

This study aims to examine the financial risk and performance of airline companies in Thailand during the post-COVID-19 period, investigate financial risk management strategies adopted after the crisis, and analyze the relationships among financial variables and financial risk trends to identify key issues for future consideration. The study employs a documentary research approach using secondary data obtained from financial statements and annual reports of airline companies listed on the Stock Exchange of Thailand. Financial ratio analysis is applied to evaluate profitability, leverage, and liquidity, while content analysis is used to interpret qualitative financial information. In addition, trend analysis and correlation analysis are utilized to examine relationships among key financial variables. The findings indicate that airline business models significantly influence financial performance and risk. Low-cost airlines show rapid recovery but higher financial risk, regional airlines demonstrate more stable performance, and full-service airlines exhibit high revenue potential with greater volatility. The results highlight the importance of capital structure management, liquidity maintenance, and operational efficiency for ensuring long-term financial sustainability in the aviation industry.

Keywords: Financial Risk, Financial Performance, Airline Industry

Introduction

The aviation industry experienced an unprecedented disruption due to the COVID-19 pandemic, which began in late 2019 and severely impacted global air travel during 2020-2021. The rapid spread of the virus across countries led to widespread border closures, travel restrictions, and repeated airspace shutdowns. As a result, many airlines were forced to suspend operations and ground a significant portion of their fleets (International Air Transport Association [IATA], 2021).

These disruptions created substantial financial challenges for airline companies worldwide. Revenues declined sharply, while fixed costs such as aircraft leasing, maintenance, and personnel expenses remained high. Consequently, many airlines faced severe liquidity constraints and increased financial risk. Some airlines were able to survive through strategic adjustments, including cost reduction, restructuring, and financial support, while others were unable to sustain operations (International Civil Aviation Organization [ICAO], 2022).

The airline industry is inherently capital-intensive and highly sensitive to external shocks. It requires substantial investment and strong liquidity management, making it

particularly vulnerable during periods of crisis. Therefore, understanding financial risk and performance in the post-COVID-19 period is critical for evaluating recovery patterns and identifying sustainable strategies for the future.

In the Thai context, airline companies have shown different recovery patterns depending on their business models. Low-cost, regional, and full-service airlines exhibit distinct financial structures, cost patterns, and strategic responses. These differences may lead to variations in financial risk and performance during the recovery period.

Therefore, this study addresses this gap by analyzing financial risk and performance across different airline business models in Thailand, with the aim of identifying key recovery patterns and future financial implications.

Objectives

1. To examine the financial risk and performance of airline companies in Thailand during the post-COVID-19 period.
2. To investigate financial risk management strategies adopted by airlines after the COVID-19 crisis.
3. To analyze the relationships among financial variables and financial risk trends in order to identify key issues that airlines should consider in the future.

Research Questions

1. What are the key financial risks and performance characteristics of airline companies in Thailand during the post-COVID-19 period?
2. What financial risk management strategies have been adopted by airline companies in Thailand after the COVID-19 crisis?
3. What are the relationships among key financial variables, and what financial risks should airlines consider in the future?

Research Hypothesis

Based on prior research on airline financial performance and risk, the following hypotheses are proposed:

- H1:** Leverage is negatively associated with financial performance.
H2: Revenue is positively associated with financial performance.
H3: The strength of these relationships differs across airline business models.

Literature Review and Theory

Airline companies can be categorized into different business models, including low-cost, regional, and full-service carriers, each operating under distinct cost structures and strategic approaches. Full-service airlines typically incur higher fixed costs and are more vulnerable to demand shocks, while low-cost carriers emphasize cost efficiency and variable cost structures, allowing greater flexibility. Regional airlines, operating on a smaller scale, tend to demonstrate adaptability through niche markets and route optimization. These differences significantly influence financial performance and risk exposure in the aviation industry (Morrell, 2011).

Financial risk can be analyzed using financial ratio analysis, which provides insights into liquidity, leverage, and profitability. Key indicators such as return on assets, debt-to-equity ratio, and profit margins are commonly used to assess financial performance and stability. In addition, correlation analysis helps examine relationships among financial variables and identify key drivers of financial risk, supporting effective financial decision-making and long-

term sustainability (Ross et al., 2019). Previous studies indicate that airlines often face liquidity constraints, high leverage, and volatile profitability, particularly during periods of economic crisis.

Overall, airline business models differ significantly in terms of cost structures, revenue generation, and operational strategies, which directly influence financial performance and risk across airline types (Bitzan & Peoples, 2016; Daft & Albers, 2015; Morrell, 2011).

Table 1 *Comparison of Airline Business Models*

Dimension	Low-Cost Airline	Regional Airline	Full-Service Airline
Service Model	Basic service, no frills	Limited service, niche routes	Full service, premium experience
Route Network	Short-haul, point-to-point	Short-medium haul, feeder routes	Global network, hub-and-spoke
Revenue Structure	Ticket + ancillary revenue	Ticket + limited add-ons	Ticket + premium services
Cost Structure	Low cost, high variable cost	Moderate cost	High fixed cost
Pricing Strategy	Low price (cost leadership)	Moderate price	High price (differentiation)
Operational Strategy	High aircraft utilization	Flexible route management	Network optimization
Financial Risk	High leverage, thin margins	Moderate risk	High fixed cost risk
Customer Segment	Price-sensitive	Regional / niche	Business & premium travelers

Previous studies have examined airline performance and financial risk from various perspectives. Bitzan and Peoples (2016) found that different airline business models exhibit significant differences in cost structures and financial performance, while Wang and Heinonen (2015) emphasized the importance of financial ratios in evaluating airline performance. In the context of crisis, Gössling et al. (2021) highlighted that the COVID-19 pandemic caused severe disruptions, leading to declining revenues and increased financial risk. In addition, O'Connell and Williams (2005) suggested that airline positioning and service models influence operational strategies and performance outcomes. Overall, these studies indicate that both business models and external shocks play a critical role in shaping financial performance and risk in the airline industry.

Methodology

This study employs a documentary research approach using secondary data from annual reports and financial statements of airline companies listed on the Stock Exchange of Thailand (SET, 2025). The data are considered reliable as they have been audited and publicly disclosed. The sample consists of three airline business models in Thailand, including low-cost, regional, and full-service (premium) airlines, anonymized as Airline A, Airline B, and Airline C. Data analysis includes financial ratio analysis to evaluate profitability and leverage, content analysis to interpret qualitative information, and basic statistical techniques such as trend analysis and Pearson correlation to examine relationships among financial variables. This study is subject to

limitations, as financial data for some airlines may be incomplete in certain years; therefore, the analysis is based on available and consistent data.

Results

The findings of this study can be summarized according to the research objectives.

For Objective 1, financial risk and performance of airline companies in Thailand during the post-COVID-19 period (2021–2025) were analyzed using financial ratios and key indicators.

The results indicate that low-cost airlines show strong recovery in revenue and profitability, with revenue increasing significantly from approximately 4,558 million baht in 2021 to over 49,000 million baht in 2025. However, they remain financially fragile due to high leverage and fluctuating profitability.

In contrast, regional airlines demonstrate more stable performance, with consistent improvements in profitability, as reflected in return on assets increasing from -14.97% to 11.94%. They also exhibit relatively lower financial risk. Premium airlines show substantial revenue growth, reaching over 190,000 million baht, but experience high financial volatility, with net profit fluctuating significantly across the period due to structural costs and financial restructuring.

Overall, the findings suggest that airline business models significantly influence financial performance and risk, with low-cost airlines characterized by rapid recovery but higher risk, regional airlines by stability, and premium airlines by high potential but greater volatility.

Table 2 Summary of Financial Performance and Risk

Airline Model	Profitability	Financial Risk	Liquidity	Overall Assessment
Low-Cost	Moderate (recovery)	High	Improving	Recovery but fragile
Regional	High	Low-Moderate	Strong	Stable and efficient
Premium	Volatile	High	Strong	High risk, high recovery

For Objective 2, the financial risk management strategies adopted by airline companies after the COVID-19 crisis were analyzed based on financial data and annual reports.

The results indicate that low-cost airlines emphasize cost efficiency and cash flow management, reflected in rapid revenue recovery from approximately 4,558 million baht in 2021 to over 49,000 million baht in 2025. However, their relatively high leverage suggests continued financial vulnerability. Regional airlines adopt a more balanced strategy, focusing on profitability and operational stability, as shown by improvements in return on assets from -14.97% to 11.94% and consistently positive net profit after 2022. In contrast, premium airlines rely on restructuring and financial recovery strategies, including capital restructuring and debt reduction. Although revenue increased significantly to over 190,000 million baht, financial performance remains volatile, with net profit fluctuating between positive and negative values across the period. Overall, financial risk management strategies differ significantly across airline business models, reflecting variations in cost structures and operational priorities.

For Objective 3, the relationships among financial variables and financial risk trends were analyzed to identify key issues for future consideration.

The results indicate that financial performance is significantly associated with both leverage and revenue across airline business models. A moderate to strong negative correlation

is observed between leverage and return on assets in low-cost airlines ($r = -0.65$), suggesting that higher debt levels increase financial risk and reduce profitability. In contrast, regional airlines show a weaker relationship ($r = -0.30$), indicating more stable financial structures, while the relationship in premium airlines appears inconsistent due to restructuring effects.

Revenue demonstrates a strong positive correlation with financial performance, particularly in regional airlines ($r = 0.85-0.90$), confirming that revenue growth is a key driver of profitability and recovery. Although premium airlines also show a positive relationship ($r = 0.40-0.50$), the impact is less stable due to high fixed costs and financial restructuring.

Overall, the findings suggest that financial risk and performance are influenced by different drivers across airline models. Low-cost airlines are more sensitive to leverage, regional airlines rely primarily on revenue growth, and premium airlines are affected by structural adjustments. The results support H1 and H2, while H3 is also supported, as the strength of these relationships varies across airline business models. These findings highlight the importance of capital structure management, liquidity maintenance, and revenue stability in ensuring long-term financial sustainability.

Table 3 *Correlation Analysis Across Airline Models*

Variables	Low-Cost	Regional	Premium	Interpretation
Leverage vs ROA	$r = -0.65$	$r = -0.30$	Weak/Unstable	Debt reduces performance (strongest in low-cost)
Revenue vs ROA	$r = 0.75$	$r = 0.85$	$r = 0.50$	Revenue drives performance
Revenue vs Net Profit	$r = 0.80$	$r = 0.90$	$r = 0.40$	Strongest in regional
Leverage vs Profit Margin	$r = -0.55$	Weak	Unstable	Risk effect varies by model

Conclusion

This study examined financial risk, performance, and management strategies of airline companies in Thailand during the post-COVID-19 period. The findings reveal that airline business models play a critical role in shaping financial outcomes across different operational structures. Low-cost airlines demonstrate rapid recovery but remain financially fragile due to high leverage, while regional airlines exhibit more stable performance and lower risk levels. In contrast, premium airlines show strong revenue recovery but significant financial volatility driven by structural cost constraints and restructuring effects.

The study further highlights that financial performance is closely associated with leverage, liquidity, and operational efficiency. Overall, effective financial risk management, particularly in terms of capital structure and cash flow management, is essential for ensuring long-term sustainability in the aviation industry.

Discussion and Recommendations

The findings of this study are consistent with previous research indicating that airline business models significantly influence financial performance (Bitzan & Peoples, 2016). Low-cost airlines demonstrate rapid recovery but remain financially fragile due to high leverage, while premium airlines exhibit high revenue potential with greater volatility. These results also align with Gössling et al. (2021), highlighting continued financial uncertainty in the post-COVID-19 aviation industry. Importantly, this study extends prior research by demonstrating

that regional airlines achieve more stable financial performance due to moderate cost structures and focused operational strategies.

Based on the findings, airlines should adopt prudent capital structure management, strengthen liquidity and cash flow, and improve operational efficiency in line with their business models. In addition, strategic flexibility and revenue diversification are essential for long-term sustainability. From a policy perspective, governments should support the aviation industry through improved access to funding, tax relief, and liquidity support during crises. Overall, effective financial management and policy support are critical for enhancing resilience in a highly uncertain aviation environment.

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