A Study on Corporate Financial Risk Management in IndiGo Airlines, Nagpur

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***Abstract*—One factor that greatly determines sustainability within the aviation industry is corporate financial risk management as fluctuation in fuel prices, foreign exchange rates and liquidity constraints are some of the major challenges in the industry. This paper is an analysis of financial risk management system in IndiGo Airlines, the largest passenger airliner in India. The paper has determined the most important financial risks, risk mitigation, and the effect of risk management on financial stability through descriptive and analytical research. Statistical analysis is done to analyse primary data consisting of the finance professionals and secondary data consisting of annual reports and industry publications. The results show that financial resilience is improved with the help of structured hedging, control of liquidity, and strategic governance. This study leads to the comprehension of the risk management practice in the developing markets of the aviation industry and provides some practical suggestions on how to enhance the financial frameworks.**

***Keywords*—Financial Risk Management, IndiGo Airlines, Fuel hedging, Foreign Exchange risk, Liquidity management, Aviation Industry, Corporate Governance.**

I. INTRODUCTION

The aviation sector is in a very dynamic economic context, which includes the changeable fuel prices, currency exchange rates, regulatory changes and market competition. Financial risk management has thereby become a standing block of corporate strategic approach among airlines throughout the world. IndiGo Airlines is a low-cost carrier that dominates the domestic market but in India, it is vulnerable to various financial risks that may cripple profitability and business survival. This study examines the process through which IndiGo manages financial risks including market risk, credit risk, liquidity risk and operational risk through identification, evaluation and mitigation. The research is important because there is little scholarly emphasis on aviation-specific risk frameworks in India, considering the increased role of the sector to the national economy. This paper will help fill the gap between theory and practice of risk models and their implementation in an emerging market that is dynamic and that of IndiGo.

II. LITERATURE REVIEW

Aviation financial risk management has been widely researched on an international level, but little has been done on a regional basis. Mehta and Joshi (2021) point out the application of derivative instruments and forward contracts to mitigate against the volatility of the price of jet fuel and exchange fluctuations. According to Kumar (2020), Indian airlines, especially low-cost carriers, are highly operating levers, which are easily affected by changes in oil prices. Deshmukh and Rao (2022) promote enterprise risk management (ERM) systems to synchronize financial policies with the objectives of operations.

The author, Verma (2020) talks about how the swaps, futures and options are used to smooth cash flows of large organizations. According to Singh and Patel (2019), liquidity deficits and substantial debt ratios are among the major threats to the sustainability of airlines. Banerjee (2021) outlines the importance of corporate governance in risk management, Sharma and Bansal (2021) associate the consistent use of fuel hedges with better profit stability. Thomas and Iyer (2020) discuss currency risk in aviation at the global level and emphasize the necessity to have real-time monitoring systems.

Overall, these works highlight the significance of active risk management, but they also indicate a lack of research on this topic in India regarding IndiGo Airlines. To fill this gap, the paper will analyse the risk management procedures at IndiGo in the Indian context, both regulatory and economic.

III. RESEARCH METHODOLOGY

a. Research Design
To evaluate the financial risk management practices of IndiGo, the research design of the study is descriptive and analytical and integrates the qualitative perspective with quantitative analysis to evaluate the organization.

b. Universe and Population
The Indian aviation industry is the universe, and it is centered on the IndiGo Airlines. The sample population comprises of finance professionals, analysts and managerial personnel that are engaged in the financial decision making at IndiGo, as well as secondary data of annual reports, DGCA publications and industry databases.

c. Sample and Sampling Method
The sample of 100 respondents consisting of finance executives, senior analysts, and accounting professionals who have been acquainted with the financial operations of IndiGo was purposive to obtain relevant and accurate information.

d. Data Collection
1) Primary Data:
- Structured questionnaires and semi structured interviews with the finance professionals.

2) Secondary Data:
- Annual reports of IndiGo (20192024) audited financial statement, DGCA reports, IATA publications and academic journals.

e. Data Analysis
Data were analysed using:
- Descriptive statistics (mean, frequency distribution).
- Correlation and regression analysis.
- Graphical trend figures (fuel costs, exchange rates, financial ratios)
- Chi-square and regression test.

f. Hypotheses
- H0: Financial risk management does not make a significant difference to financial stability of IndiGo.
- H1: Financial stability is greatly enhanced with financial risk management.
- H0: Fuel price volatility does not have a significant impact on the profitability of IndiGo.
- H1: The volatility of fuel price has a considerable influence on profitability.

IV. DATA ANALYSIS AND FINDINGS

a. Detection of Financial Risks
According to the respondents, the greatest financial threats to IndiGo were fuel price volatility (87%), foreign exchange risk (78%), liquidity risk (65%), and credit risk (59%).

b. Risk Mitigation Strategies
IndiGo tries to use a multi-pronged strategy:
- Fuel Hedging: 72% of the respondents affirmed that they used futures and option to hedge the fuel prices.
- Currency Hedging: USD-exposures are managed by forward contracts and swaps.
- Liquidity Management: The high liquidity ratios and revolving credit facilities.
- Governance Framework: Frequent audits and a special risk oversight committee.

c. Implication on Financial Performance
The regression analysis found that there is a positive and strong relationship between the structured hedging practices and the net profit margins ($r = 0.82$). The high fuel price volatility also indicated that there was a 12 to 18 percent variability in the operating costs during periods of high volatility, which facilitated the necessity of active risk management.

d. Hypothesis Testing
- Hypothesis 1: The chi-square test rejected H 0 ($p = 0.05$), which provided support to the idea that financial risk management has significant role in improving financial stability.
- Hypothesis 2: Hypothesis 1 was proved by regression analysis with H1 meaning that fuel price volatility has a significant effect on profitability (= 0.67, $p = 0.01$).

V. DISCUSSION

The results are consistent with the world literature but raise specific issues in the Indian situation. The use of hedging instruments by IndiGo is consistent with the behaviour of international airlines, but access to advanced derivatives in India is limited, which prevents flexibility. The airline is in a good liquidity situation that cushions against operational shocks, however, the increase in the debt levels after the COVID-19 is of concern. The study highlights the importance of governance in the risk management. The risk committee is at the board level of IndiGo, as the company has transparency, but more integration of predictive analytics may improve proactive decision-making. The study adds that the fuel and forex risks are managed well but there are emerging risks that include cyber-financial threats and ESG-related financial exposures that need to be addressed.

VI.CONCLUSION

IndiGo Airlines has developed a strong financial risk management system which has played an important role in making it a market leader and financially strong. Strategic hedging, liquidity management, and good governance help the airline to reduce major financial exposures. Nevertheless, the dynamics of the market and alterations in regulations require the constant development of risk plans. This paper confirms the necessity of formal risk management in the aviation sector and provides a regional outlook of the practice in India. It confirms that proactive financial risk management is not only a self-defence tool but a strategic facilitator of sustainable growth.

VII.RECOMMENDATIONS

1) Enhance Predictive Analytics: Invest in AI-powered real-time risk prediction.
2) Hedge Instruments: Investigate commodity swaps and collars to manage the fuel prices better.
3) Enhance Liquidity Reserves: Have larger amounts of cash on tap to absorb unexpected shocks.
4) Embark on ESG Risks Integration: Incorporate environmental and social governance risks in financial risk assessment.
5) Periodic Training: Upskill financial teams on the upcoming areas of risk and digital capabilities.

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