

# Chapter 14

## Performance of Airlines: A Comparative Analysis for the COVID–19 Era

**Dilek Teker**

*Isik University, Turkey*

**Suat Teker**

*Isik University, Turkey*

### **ABSTRACT**

*This chapter investigates the financial performance of airline companies and proposes a harmonic index to state a performance ranking for the COVID-19 era covering the years 2018, 2019, and 2020. All data required for this study were obtained from the Thomson-Reuters database. A total number of 111 airlines are reached and listed by total assets. The 20 biggest airlines by total assets in 2020 are chosen for this study. A harmonic index is constructed by using performance indicators for profitability, liquidity, and efficiency. Then, the biggest 20 airlines are ranked by the harmonic index values for the COVID-19 era. The results revealed that North America and European-based airlines performed very badly in 2020 compared to pre-COVID years while Far East-based airlines were able to manage the pandemic year much better.*

### **INTRODUCTION**

Airlines is a sector that makes a great contribution to globalization culturally, socially and economically by establishing links between countries and people. In this sector, which has been subject to strict regulations for many years, an environment open to international competition has emerged in recent years. In parallel with these sectoral developments, instead of traditional airlines, a structure that is based on competition all over the world and has to carry out its activities with much more complex strategies has emerged. In this context, determining the performance of globally competing airlines by only looking at their total assets, annual revenues or profits can be viewed as an inadequate assessment. Therefore, it would be more appropriate to use a comprehensive airline performance appraisal model.

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This chapter investigates the financial performance of airlines companies and propose a harmonic index to form a performance ranking for the Covid-19 era covering the years 2018, 2019 and 2020. It is strongly argued that the Covid-19 era has caused structural changes in many sectors by setting new rules for competing and doing business. Therefore, it may be a viable academic question to investigate the performance of airlines in the Covid-era. All data required for this study were obtained from the Thomson-Reuters database. In accordance, all airline companies operating in the sector and with continuous data between the years 2011-2020 were reached. At the end of this filtering, 111 airlines operating in the sector were obtained. Then, the 20 airlines with the highest total asset value as of 2020 are listed as the subject of this study. In order to measure the performance of the airlines in the Covid-19 era a harmonic index is constructed considering the performance areas of profitability, liquidity and efficiency for the period of 2018-2020. Based upon the key ratios representing each performance area an index value is produced for each company and for each year. The empirical findings support that the financial performance considering total revenues or net income may lead companies to follow different strategic decisions than otherwise stated by the harmonic index. The paper is organized as follows. The next section covers the previous related literature about the measurement of financial performance of airlines. The following section explains the data employed and the model constructed. The later section presents the empirical results. The final section discusses the concluding remarks.

## **BACKGROUND**

In recent years, many airline companies have come to the fore with frequent flight disruptions, layoffs and financial problems. Even many big and well-known airlines have tried to solve their financial problems by seeking government support or finding a new partner or strategically collaborating with other airlines. Netherlands based KLM and French government owned Air France was merged in 2004. Alitalia was purchased by another Italian air carrier, AirOne, in 2008. Then, Air France-KLM purchased 25% shares of Alitalia in 2008. London based British Airways and Madrid based Iberia was merged in 2011 and created an Anglo-Spanish multinational airlines named International Consolidated Airlines. Meanwhile, international carriers seeked strategic cooperation to stay competitive. Star Alliance formed in 1997 with five founding members is the first multilateral airlines alliance in the world. It currently has 26 member airlines and its headquarter is located in Frankfurt. Oneworld founded in 1999 with 14 member airlines is headquartered in New York City. Sky Team founded in 2000 has 19 member airlines and its headquarter is located in Amsterdam. Among these alliances, the Star Alliance is biggest, Sky Team is the second and Oneworld is the third alliances in terms of passengers carried in 2019.

Wang (2008) indicates the importance of financial ratios in the measurement of airline company performance and conduct an empirical analysis of financial performance on three domestic airlines in Taiwan using the fuzzy multi-criteria decision-making (FMCDM) method. This study analyzed the effect of 21 financial indicators on airlines performance in four categories namely; financial structure, solvency, turnover and profitability. The financial structure indicators are defined as fixed assets to equity, fixed assets to long-term liabilities, fixed assets to long-term capital, debt to total assets, stockholder's equity to total liabilities, working capital to total assets. The solvency indicators are current ratio, quick ratio, cash ratio, cash flow ratio and working capital to current asset. The turnover indicators are accounts payable turnover, accounts receivable turnover, fixed asset turnover, total asset turnover, net income/

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