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FINANCIAL PERFORMANCE AND BANKRUPTCY ANALYSIS OF AIRLINE COMPANIES: A CASE STUDY OF FINNAIR AND NORWEGIAN AIRLINES 2015-2021

Bachelor's thesis
Programme TVTB, specialisation Finance & Accounting

Supervisor: Kalle Ahi, lecturer

Tallinn 2022

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ABSTRACT

Due to globalization, there is more movement of people and labor, for the tourist destination, hub for investment and startups, marketing, and so on. One of the most assisting factors for this globalization is growing airline companies all over the world. Airlines are the convenient, affordable, safe, and fastest way to reach the destination. Apart from this, there is growing competition among the airline companies as there is a rise in low-cost airlines dominating the market. Airline companies have their own strategies to compete in the competitive environment with lots of companies providing their services. This research paper comprises the financial analysis and performance of two low-cost airlines Finnair and Norwegian airlines from the period 2015 to 2021, during the analysis, the year 2020 to date is affected by the COVID-19 pandemic. The ratios

This paper aims to evaluate the financial performance of the Finnair and Norwegian airlines using liquidity, leverage, efficiency, profitability, airlines specific ratios as well as bankruptcy analysis using Altman's Z-score. Financial performance analysis is done by computing the financial ratios, airline-specific ratios, and Altman's Z-score with the help of data collected from the company's annual report from 2015 to 2021. The outcome of the analysis shows that Finnair has had better financial performance than Norwegian airlines before the COVID-19 pandemic, however, both companies are triggered by decreased sales due to the travel restrictions imposed by the countries to stop the spread of coronavirus. Norwegian airline was financially struggling even before the COVID-19 pandemic and hence in 2020, it applied for bankruptcy protection and financial reconstruction. However, after successful completion of examinership and financial reconstruction in 2021, Norwegian reduced the number of operating fleets to 51 and mainly provide short haul services within Europe. In addition, the net profit of Norwegian is 1870,5 million Nok in 2021 compared to -23039,8 million Nok in 2020.

Keywords: Financial ratio analysis, Airline industry, Financial performance, Bankruptcy, Finnair, and Norwegian airlines

INTRODUCTION

The aviation industry is a major cornerstone of globalization providing affordable, safe, and fastest means of transportation, facilitating the movement of goods and people across the globe. The rise of the airline business began in the 1950s with the development of commercial jet use. The competition in the industry continued to grow with the establishment of a low-cost airline named Pacific Southwest Airlines, whose first concept started in the USA in 1949. Since then, low-cost airlines are competing with traditional legacy airlines by providing as much as low fares, more flight schedules, and destinations, less transit, and layover time with great hospitality towards passengers and comfort during the flight. Though the industry is growing, it is facing some externalities such as the global recession from 2008 to 2009 and the recent COVID-19 global pandemic in 2020. Norwegian airline in context is financially struggling and Finnair is comparatively more financially stable before the COVID-19 pandemic. However, during the pandemic, both airlines were struggling a lot resulting in fewer aircraft in operations and only flying to a few destinations. The study of these airlines, one having financial discrepancy compared to another even before the COVID-19 pandemic and both airlines struggling during pandemic gives a better description in this research paper.

This research paper, therefore, aims to analyze the financial performance of two airline companies (Finnair and Norwegian Airlines) from Nordic countries based on their annual financial performance. Analyzing the financial performance is followed by the financial ratio analysis which is a key element to effective planning and proper financial management. Financial ratio analysis is a crucial aspect for creditors, investors, stakeholders, and other businesses for decision-making in investing and lending. In addition to the financially struggling stage for Norwegian Airlines, both Finnair and Norwegian Airlines faced flight halts for almost a year in 2020 triggered by the recent COVID-19 pandemic. Based on the financial ratio analysis we can measure the overall financial state and identify in which aspect the company is financially stable.

The aim of this research paper are answered with the below research questions based on the financial performance analysis.

1. How do the financial and airline-specific ratios be useful to evaluate the financial performance of two airline companies?

2. Which company is better in comparison to profitability, liquidity, solvency, and efficiency before and during the COVID-19 pandemic?
3. What is the effect of COVID-19 on the financial performance of airline companies?

To answer the proposed research questions, this research paper consists of two parts, i.e., the theoretical and empirical parts. The literature review is conducted in the theoretical part to gain the knowledge of traditional financial ratios and airline industry-specific ratios and have comparative analysis based on their annual financial performance. The general idea of the selected financial ratios in this paper gives an overview of the company's financial status in different aspects. The empirical part of this paper provides the evaluation of 8 financial ratios, 3 airline-specific metrics, and Altman's Z-scores. To analyze the financial ratios, the selected period of 2015 to 2021, is enough time frame to analyze their performance before and during the COVID-19 pandemic. The quantitative research method is used in this thesis paper and secondary data sources, i.e., annual reports of the selected companies (Norwegian and Finnair) are taken from their respective websites.

The first chapter of this paper mainly focuses on methodology describing the concept of financial analysis, description of financial ratios, and formulae used, followed by the calculation of selected financial ratios to be calculated and analyzed for the year 2015 to 2021.

The second chapter provides a summary of the airline business, including its beginnings and growth. Additionally, the general information and history of Finnair and Norwegian airlines are also provided in this chapter.

In the third chapter, calculation, analysis, and comparisons are done based on the ratio calculation outcomes as well as the analysis of Altman's Z-scores. The final part comprises the conclusion based on the analysis, a list of references used in this paper, and appendices consisting of annual financial reports of Finnair and Norwegian airlines.

1. LITERATURE REVIEW

1.1 The concept and nature of the financial analysis

Financial analysis is an important aspect to analyze and compare different financial information of the company, which can be seen in their annual financial performance report. Different pieces of financial information listed on each line in the balance sheet, income statement, and cash flow statement over a specified period can be analyzed. Thereafter, it is possible to see the positive or negative outcomes of their performance. In the process of financial analysis, financial ratios can be used to see the performance based on liquidity, efficiency, solvency, profitability, and market value ratios. Users of financial statements generally see the downward or upward trend of the ratios in the past to see what is most likely to occur in the future. (Noreen, Brewer, & Garrison, 2011)

Financial analysis is also known as the process of evaluating all the components of the financial statement, for instance, each line item of the balance sheet and the income statement, to gather the firm's financial performance and position (Kuppapally, 2008). In the financial statements, there is balance sheet and an income statement, a statement of cashflow and a shareholder's equity. The financial statements of the firms are prepared based on historically recorded facts for each activity expressed in monetary terms and is prepared generally in one year. All the recorded facts or the data in the financial statements are done based on accounting standards i.e., termed as generally accepted accounting principles (GAAP) and International Financial Reporting Standards (IFRS). (Van Tendeloo & Vanstraelen, 2005)

In the financial statement analysis, the most frequent methodologies are horizontal, vertical, and ratio analysis. Horizontal analysis compares the historical financial statements which are generally reported based on the company's policy, i.e., either quarterly or yearly. In horizontal analysis, the current year's financial performance of each line item from the balance sheet and the income statement can be compared with the base year to see the changes in the progress (Mautz Jr & Angell, 2006). In general horizontal analysis is a strategy for evaluating a company's financial performance using time series data (Lakada, et al 2017). Vertical analysis is a tool to reflect the relationship among each item in the financial statement within the same year. On the other hand, vertical analysis is also known as a technique that analyzes the various items that

appeared in the financial statement and expresses them as a percentage of a base year to analyze the differences (Jayawardhana, 2016).

Financial ratios show the company's overall efficiency in various aspects which are most concerned by the creditors, investors, and managers to assess the efficiency of the company. The creditors are mostly concerned about whether the company is capable of paying its obligations in the future based on predicting future earnings. Stakeholders focus on the dividends pay-out ratios, investors see the company's growth trend over profitability, and the management team evaluates the overall financial performance efficiency of the company (Gadoiu, 2014). Though the financial ratios used for evaluating the firm's performance are considered traditional, they give meaningful results and are a powerful tool for creditors, investors, business analysts, decision-makers, and financial managers (Delen, et al 2013).

Financial ratios help to compare and benchmark the financial performance of one firm with another firm in the same industry which assists to identify the risk where the company is lagging in profitability, and liquidity as well as the company's operations. Financial ratios, on the one hand, provide the information on a firm's efficiency to compete in the market, moreover, it also enlightens the company's progress in the future. Looking into the trend of financial ratios, risk assessment, decision making, and predicting the firm's performance in future can be done with the help of financial ratios. Whereas there are some limitations of financial ratios as well in which the numerator and denominator used in the financial ratios from the financial statement, if any of these are mistakenly interpreted then the ratio is incorrect. The firms are using different accounting practices, and even among the same industry the practice may not be similar and consistent, so the comparison between them is confusing. (Faello, 2015)

1.2 Financial ratios analysis

Financial ratios of the companies mainly help in analyzing the financial status and their performance based on the available public financial information. Such ratios are required to be in balanced status to keep the firm operation smoothly. The financial ratios such as Liquidity, Asset management, Debt management, Profitability as well as the airline specific metrics i.e., revenue passenger kilometers, available seat kilometers and passenger load factor are used in this paper.

1.2.1 Liquidity ratios

Liquidity of a firm denotes the availability of liquid assets to pay off its short-term debt obligations. The liquidity of the firm can be ensured by maintaining the assets that the company holds which are easily convertible into cash to fulfil the financial obligations. The higher level of liquidity reflects that the company can manage higher working capital for growth and smooth financial operations (Patjoshi, 2016). Cash balances such as cash in hand and cash in bank reflects optimum liquidity providing sufficient working capital for the company, on the other hand being deficient in working capital does not ensure its existence because the company is not able to solve the issue of short-term obligations. (Akinleye & Ogunleye, 2019)

The current ratio is also known as primary liquidity, which measures the company's ability and efficiency to meet its short-term obligations or debt only by its current assets. Current ratio comprises current assets and current liabilities, of which the current assets are supposed to be converted into cash or revenue within a year to settle its current liabilities. When a company's current assets are higher compared to its current liabilities, it is considered as solvent. (Ugwa, et al 2021)

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} \quad (1)$$

The higher current ratio shows strong liquidity and greater safety towards short-term obligations and depending upon the industries the good current ratio is 2:1. However, a higher current ratio than average for manufacturing firms indicates that there is poor inventory management. Since airline companies do not have inventories, their current assets are lower than other industries, their current ratio is generally lower. (Durrah, et al 2016)

The quick ratio is another approach to see the solvency of a company to pay its short-term liabilities with its more liquid assets or cash assets. The more liquid assets the company has the more is the ability to pay its current liabilities. Depending upon the industries, a quick ratio of 1.0 or larger is acceptable and is recommended. (Berk, et al 2013)

$$\text{Quick Ratio} = \frac{\text{Cash and Cash equivalents+receivables}}{\text{Current Liabilities}} \quad (2)$$

1.2.2 Asset management ratios

Asset management ratios measure the efficiency of a company in managing its assets which are converted into cash through sales. Asset management ratios, in other words, are also described as turnover ratios showing how effectively a company uses its available assets to generate optimum profits. So, the higher the turnover ratio rate, the higher the rate of utilization efficiency of assets. These ratios illustrate how quickly the inventory can be turned into receivables and into cash. Cash is always the best liquid asset, but it is not useful in generating revenue, however other assets on the balance sheet helps to generate revenue with ongoing activities. (Berk, et al 2013)

Asset turnover ratio is a measure to see how efficiently the firm's management aspect is using the available assets to generate revenue. From the calculation point of view, it explains how much profit is generated from each euro spent on assets over time (Berk, et al 2013). This ratio also measures the overall investment efficiency with the available assets comprising both long-term and short-term assets. (Warrad & Al Omari, 2015)

$$\text{Asset Turnover Ratio} = \frac{\text{Sales}}{\text{Total Assets}} \quad (3)$$

The Days sales outstanding ratio is the average number of days the customer takes to pay the invoices or the payments towards the company's credit sales. In other words, it is the time taken by the company to collect its credit sales from customers. The collection period of a company shows how quickly the company is able to collect cash from its sales. The lower days sales outstanding indicates that the company has a very efficient and strict collection policy towards its debt. However, on the other hand strict credit policy will lower down the potential customers in business. (Monea, 2019)

$$\text{Days Sales Outstanding} = \frac{\text{Average Receivables}}{\text{Average Sales}} * 365 \text{ days} \quad (4)$$

1.2.3 Debt management ratios

Debt management ratios are also called leverage ratios which are used to measure the company's ability to repay long-term debt obligations. Another word referred to is debt management ratio is long-term solvency ratio which helps the long-term lenders to assure the periodic payment of interest in loan and repayment of that loan on maturity (Bardia, 2012). Moreover, solvency ratios provide adequate information about the amount of debt the company has in its capital

structure and measures its cash flow and earnings which is required to cover the interest expenses and other fixed charges which includes the fixed lease contract or periodic rental payments. In addition, when a company requires more funds from outsourcing to raise its capital, then the amount borrowed is considered financial leverage as fixed interest payments for the agreed time period are implied on it. (Gibson, 2012)

Debt to equity ratio is an important leverage indicator ratio which shows how the company finances its activities with debt in relation to the shareholders' equity. Total debt of the company is divided with the shareholder's equity. From the mathematical equation of debt-to-equity ratio, we can say that it compares the amount the fund financed by the creditors to the fund that the company owns from its shareholders. (Robinson, et al 2009)

$$\text{Debt to Equity Ratio} = \frac{\text{Total Debt}}{\text{Total Shareholder's Equity}} \quad (5)$$

1.2.4 Profitability ratios

Profitability ratios of a company is denoted as how profitable the firm is based on capital investment in the market. Profitability ratios measure the company's profit from both the balance sheet and the income statement. General understanding about profitability is to keep the cost of goods as low as possible including from supply chain to manufacturing process and then finally to finished to finished goods or services and generate optimum profits. Hence, the profitability of the company reflects its competitive position in the market and various income sources and the expenses can be seen in the income statement. (Robinson, Greuning, Henry, & Broihahn, 2009)

Return on assets measures the efficiency to generate revenue using a company's assets. This ratio helps to give the vision of how the assets have been used and the level of profit generation. The efficient company uses comparatively less assets or mobilizes effectively so that it gains high returns. Hence, ROA is an important profitability ratio which shows overall performance efficiency of the company by reflecting the amount of revenue generated on the total assets used. (Khan & Jain, 2007)

$$\text{Return on Assets (ROA)} = \frac{\text{Net Profit}}{\text{Total Assets}} \quad (6)$$

Return on equity is an approach to analyzing profitability that measures the firm's efficiency to maximize the return from its shareholders' investments. So, this ratio is slightly different from ROA, in which the denominator is shareholders equity. Companies being more efficient in using their existing assets to generate sales and increase operating profits will results in an improved return on equity. Moreover, having fewer borrowings from the lenders reduces the liabilities, and finding the ways to reduce the tax liabilities promotes strategic financial planning and helps to have better ROE ratio. (Liesz, 2002)

$$\text{Return on Equity (ROE)} = \frac{\text{Net Income}}{\text{Total Equity}} \quad (7)$$

Net profit margin is the ratio obtained by dividing the net income by net sales which measure the profitability of the business activities. Net profit margin highlights how profitable the business is, showing the actual profit the company made from its total sales. Additionally, net income used in the numerator is the residual monetary value by deducting all the material and operational cost involved during production and supplying, interest expenses and the taxes form the total revenue. (Brigham & Houston, 2009)

$$\text{Net Profit margin} = \frac{\text{Net Income}}{\text{Net Sales}} \quad (8)$$

1.2.5 Airline specific financial ratios

Apart from analyzing the financial ratios from the annual reports of the selected airline companies for this thesis paper, there are some operational measurements which are only relative to aviation industries. The definition and the calculation of those variables are described as follows:

Available seat Kilometers is one of the metrics for operational measurement whose mathematical derivation is multiplication of the available seat per flight by the distance flown. This is sometimes also measured in miles then is called available seat miles (ASM). The bigger aircrafts the company has, they have the capacity to carry more passengers per flight. In addition, long haul flights also contribute to higher ASK as the operational cost decreases. Hence, both the long-haul flights and the bigger aircrafts carrying more passengers are preferred for high available seat kilometers. (Demydyuk, 2011)

$$\text{Available Seat Kilometers (ASK)} = \text{Available Seat} \times \text{Distance Flown} \quad (9)$$

Revenue passenger kilometers is a metric to calculate the actual passenger traffic by multiplying revenue or fare paying passenger per flight by the flight distance travelled in kilometers. RPK is the actual measure of the passenger who pays the fare during the flight, and it does not include the crew members during the flight, airline employees, kids and babies who do not need to reserve the seat. (Demydyuk, 2011)

RPK = (P) Fare Price per Flight × (D) Distance Travelled (in kilometers) (10)

Load factor is an indicator of airline efficiency which is measured by the available seat kilometers and revenue passenger kilometers. This is also an important factor for low-cost carriers (LCC) for airline operations and management purposes. Moreover, load factor is also known as a tool to measure the efficiency and the performance of airline companies (Tesfay & Solibakke, 2015). Higher load factors for the airline companies are preferred as it reflects that the company can sell most of the available seats during the flight. (Kahn, 1988)

$$\text{Load Factor} = \frac{\text{Revenue Passenger Kilometer (RPK)}}{\text{Available Seat Kilometers (ASK)}} \quad (11)$$

1.3 Altman's Z-score model and its components

The bankruptcy prediction model was developed by Edward Altman in 1968 (Hsu, 2017). Altman's Z-score model uses the financial ratios from the company's financial statement and helps to predict the probability of the company going bankrupt (Stepanyan, 2018). The initial model uses five financial ratios to predict the firm's probability to go bankrupt. The original model was limited to manufacturing companies however in 1993, Altman revised five components to four components. The fifth component is eliminated from the original model and the fourth component is revised from market value of equity to book value of equity over liabilities. The limitation of the first Z-score model was for the companies which were not listed on the stock exchange market, the new model is derived. The company does not have market value of equity if it is not listed on the stock market. The previous model was designed for manufacturing industries but the revised model is also useful for non-manufacturing firms and for new and rising companies. In addition, the operating lease taken by the airline industry, the ratio X_5 is considered to be disorted because the asset turnover ratio varies (Shome & Verma, 2020). So it is suggested to use revised model for airline industries. Along with the revision of the components, the coefficients of each ratio are also adopted. (Altman, 1968)

Altman's modified Z-score is as below:

$$Z = 6.56X_1 + 3.26X_2 + 6.72X_3 + 1.05X_4 \quad (12)$$

X_1 is the ratio of net working capital to assets which reflects the liquidity of a firm by measuring the usage of available assets of the company. Net working capital helps to analyze the amount of assets required to operate day to day transactions, where the lower ratio shows that the company has liquidity problems to pay its short-term obligations. (Abdullah & Achsani, 2020)

X2 is the ratio which analyses the retained earnings to its total assets. The retained earnings are the allocated amount from net earnings for the purpose of reinvestment and payment of debt. Most of the investors and the business analyst prefers a higher ratio because higher ratio reflects that the company can retain more earnings and reinvest them again. Lower retained earnings to assets ratio shows that the company is not able to accumulate earnings due to the company's declining business activities and not being able to earn more profits. (Gritta, et al 2011)

X_3 is the measurement of earnings of a company before interest and taxes payable to total assets. This financial ratio is the reflection that whether the company can generate earnings in proportion to its available assets or not. Additionally, it is the measure of the firm's financial efficiency to operate its activities from its assets and is independent of any tax liability. (Kulkarni, 2018)

X_4 is the Book value of equity to its total liabilities which evaluates the solvency of the firm to pay its debts without not exceeding the liabilities over equity. (Kumar & Anand, 2013)

The revised Z-score model with the score less than 1.10 is considered highly vulnerable to bankruptcy, the value between 1.10 to 2.60 is considered as the firm is in the safe zone. However, the firm with a Z-score greater than 2.60 is in a financially stable position. (Kroeze,2004)

2. OVERVIEW OF THE AVIATION INDUSTRY

This chapter describes the short background of the airline industry as well as the overview of the selected airlines; Finnair and Norwegian airlines in this paper. The literature review is conducted to gather some knowledge about the development of the airline industry and the overview of the company is taken from their annual reports which are publicly available.

2.1 Development of the airline industry

Aviation industries are flourishing as the demand for air travel is increasing all over the world. Airline industries are providing services all over the world and assisting in the global economy by transferring the goods and people to the destination. Manufacturing and supplying the aircrafts itself is the economic backbone for countries where tourism on the other hand is another aspect in the global economy.

The development of the global airline industries started in 1950s when the jet aircrafts were initiated for commercial use. Moreover, in the 1970s, wide-body also known as jumbo jets were introduced which was a great achievement in the aviation industry. This created the competitive environment among the airline companies in which the manufactured airlines were technologically advanced and the evolution was highly competitive and profitable (Belobaba, et al 2015).With the invention of new jet planes and demand of the people for more itineraries also created more demand to raise the aviation industries worldwide. Higher demand and the integration of new technologies has also demanded and increased the number of airports where there is more air traffic congestion because of high flow of people.

Recently, because of the COVID-19 the airline industry has been grounded and connection between the destinations is disconnected. This is all because of the travel restriction implemented by the nations to stop the spread of viruses. Airline industries are now in a recession period where the global revenue per kilometer (RPK) has highly declined by 66%. This recession is the highest recession faced by the airline industries after the second world war. Moreover, the world GDP growth reported in the worldwide airline industry in the year 2019 was 2.5 %, which was reported to be negative 4.2 % in 2020. In addition, it is also reported that the airline industry faced a loss of 118 billion US dollars in the year 2020 and since the flights are slowly taking place in 2021

with the distribution of COVID-19 vaccine world wide, it is expected to cut off 38 billion US dollars in 2021. Airline industries are also providing a wide range of offers on fare price and flexible tickets which will enhance customers to build up their confidence to travel and eventually the industry will recover from recession. (IATA, 2020)

In recent years low cost airlines are increasing as a result of high demand of the people to travel to more destinations with lower ticket fares. In comparison to other airlines with higher fares, in low cost airlines most of the services provided are eliminated. This is hence to reduce the operation and the labor cost from which the airline can gain profit even though with the low fare prices. The concept of a low cost airline first started in the USA in 1949 and the name of the airlines was Pacific Southwest Airlines. The question may arise how the low cost airlines are sustaining the competition with the commercial airlines? Simple answer is that they are providing low air fares with more flights operating in more destinations. As a result, this increases the volume of passengers travelling with the affordable fare and they also provide direct flights. This way the low cost airlines are sustaining in the competitive market.. In Europe Irish Ryainair is an example of the biggest low cost airline which was founded in 1991. (Vidović, Steiner, & Babić, 2006)

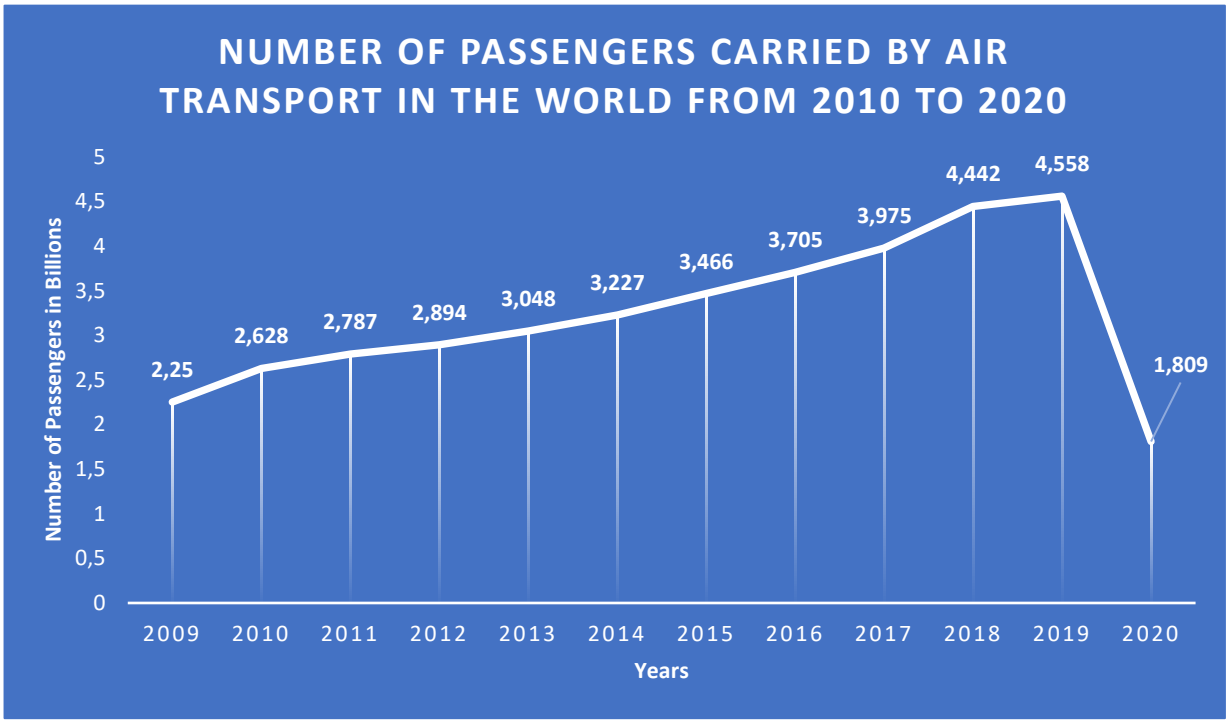

Figure1. Number of Passengers Carried by Air Transport in the World from 2009 to 2020
Source: The World Bank Data (2020)

The above figure shows the number of passengers travelling through air transport in the world since 2009. As shown from the graph, the passenger numbers are in the increasing trend, 2.25 billion in the year 2009 and hiked to 4.558 billion in 2019. However, in 2020, the COVID-19 pandemic decreased the passenger number to 1.709 billion. Based on the trend we can say that due to the increased preferences of people towards air transport, the growth of world airlines has taken place.

2.2 Finnair

Finnair is one of the oldest operating airlines and the flag carrier of Finland. The company was established in the year 1923 under the name Aero. In the following year 1924, the company introduced its first aircraft which was a German made seaplane, Junker F 13. Seaplanes were used initially due to the lack of commercial airfields in the country. The initial route was operated from Katajanokka harbour near Helsinki to Tallinn which carries mail between the two cities. The first alliance was entered with Swedish airline ABA in the same year to operate flights from Helsinki to Stockholm. The airline carried a total of 269 passengers in the first year of its operation. After a decade in 1936 all flights from Aero were operated from airports, however during the winter war in 1939-1940, flights from Helsinki to Stockholm were temporarily closed as the civil aviation was under military control and Helsinki was not considered safe for operation flights during the war. (The History of Finnair)

Aero was a private company till 1946, but after that Finish State gained most of the shared holdings in Aero which was then followed by the growth of the airline by an addition of first Douglas DC-3 aircraft. This aircraft was mostly used during World War II, but some of them were converted into civilian aircraft and Finnish government was one of them to use it for commercial purposes. In 1947, the company started using the name Finnish Airlines instead of Aero and in the year 1949 Aero became a member of IATA and received its airline code AY which is still being used by Finnair till date. However, in 1968, Finnair officially changed its name and new logo. By that time Finnair had already operated its routes to Moscow, Copenhagen, Cologne, Frankfurt, Stockholm, Oslo, Amsterdam, London, Paris, etc. In Addition, in 1969 and 1976, Finnair's flights were extended to Asia (Direct flights to Bangkok, Thailand) and to New York via Copenhagen and Amsterdam operating with wide-body DC-10 aircraft. In 1986, Finnair became the first airline to acquire satellite telephones in the aircraft DC-10 which

facilitate passengers to call from the aircraft to anywhere in the world. In the same year Finnair received its first Airbus. (The History of Finnair)

Finnair bought three A320- type aircrafts for its fleet in 1999 (Finnair Annual report, 1999). To enhance the customer comfort, environment friendliness, maintenance, training, and reduce the fuel consumption by 20-30 % than the previous aircrafts they had, Finnair purchased Six more Airbus 320 to be delivered in 2002 and 2003(Finnair Annual Report, 2000). On the occasion of its 90th anniversary, in 2014, Finnair commenced the use of 19 Airbus A350 in its aircraft fleet and in 2015, further planned to receive its first Airbus A350 XWB (Finnair Annual Report, 2014).

Finnair's strategy is focused on its geographical position, which enables it to have fastest connections between Europe and Asia. It has been providing direct flights to Bangkok, Beijing, Tokyo, Singapore and so on since 1976, which came from the competitive advantage of its geographical location as it flourished to operate long-haul flights in Europe and Asian Destinations. Hence, Finnair has become one of the most preferable choices among the customers for both within and outside of European countries. (Finnair Annual Report, 2020)

Table 1. Number of Fleets and Passengers carried by Finnair (2015-2021)

Year	2015	2016	2017	2018	2019	2020	2021
Fleets in Operation	72	73	73	81	83	83	60
Passenger Carried (in Millions)	10,2	10,8	11,9	13,3	14,7	3,5	2,9

Source: Finnair Annual Report (2015-2021)

Due to the COVID-19 pandemic, Finnair's financial performance is also negatively plunged as most of the countries imposed high travel restrictions and because of the long flight halt the number of passenger's cut off was over 70 percent. Since then, Finnair adjusted its employees downward by approximately 600(Finnair Annual Report, 2020). As of 31.12.2021, Finnair had a total of 5,323 employees but due to the continuous layoff and low flights operations, the average number of employees at work were 2,996. Furthermore, the Finnair fleet consists of 60

aircrafts and 24 aircrafts are leased to Nordic Regional Airlines (Norra). (Finnair Annual Report, 2021)

2.3 Norwegian airlines

Norwegian Airlines was founded by Bjørn Kjos in the year 1993 in the Norwegian city called Fomebu, which is near Oslo, the capital city of Norway. Norwegian was the largest airline in the Scandinavian region in its early days. The airline was initially the part of the Busy Bee airlines which was mostly operating corporate chartered flights and later it was flying chartered flights for Norwegian Armed Forces. However, in the year 1992, Busy Bee went bankrupt, and this was continued by the Norwegian Airlines. The airline offers domestic as well as long-haul services to various destinations in the United States of America and Europe. (Norwegian Air Shuttle ASA, 2016)

During the establishment year, Norwegian was providing only short-haul routes with a small fleet of three Fokker F-50s on the western coast of Norway, on the same route which Braathens SAFE was using for its operations. The three Fokker F-50 aircrafts were brought from Busy Bee during the time they went Bankrupt. The Fokker F-50s operated short-haul routes on the western part of Norway only until 2002 due to its replacement by the introduction of six Boeing 737-300. With the onset of Boeing 737-300 aircraft, the company positioned itself as a low-cost airline, operating to new destinations such as Bergen, Trondheim, Stavanger, Tromso. In December 2003, the company was listed on the Oslo Stock Exchange, now traded under the symbol NAS and eventually became one of the top three low-cost carriers in Europe. As of 2012, Norwegian was operating 68 aircrafts and further expanding the fleet to 85 by 2013. As of January 2020, Jacob Schram was announced as the new CEO of Norwegian airline. (Norwegian History, 2019)

The major shareholders in the company are Geveran Trading Company Ltd., Sundt AS, Folketrygfondet, DNB Asset Management AS and Davy Stockbrokers holding 14.4%, 13.4%, 6.5%, 6.4% and 3.4% respectively. The holdings of top 20 shareholders constitute approximately 70% of the total shares, as on 31st December 2021. The share price for Norwegians has mostly been in a decreasing trend since the year 2015 (Paul & Eriksson, 2020). As of 2020, Avanza Bank AB was holding 14.6% of its total shares which was the highest shareholding of Norwegian.

Norwegian airlines also faced the negative impact of COVID-19 pandemic due to the imposed travel restrictions. This impact was followed by the cancellation of 85 percent of its total flights, and the company temporarily laid off 7,300 employees in the year 2020. Apart from this due to the financial distress, Norwegian entered into an examinership and reconstruction process in 2020 to collect the new capital required to restructure its business. After the ease in the travel restrictions, Norwegian was providing services to 76 routes with the fleet of 20 carriers in Europe in the year 2020 however, the company was progressive towards operating 51 aircrafts in the year 2021. In addition, concerning the increasing demand of passengers, uplift of COVID-19 pandemic travel restrictions, Norwegian is seeking to increase the number of aircrafts to 70 and the routes to over 270 destinations which are mainly targeted for coming summer 2022. Norwegian owned the position of most Punctual airline and third largest low-cost airline all over Europe in 2021. (Norwegian Annual Report, 2020 & 2021)

Table 2. Number of Fleets and passenger carried by Norwegian Airlines (2015-2021)

Year	2015	2016	2017	2018	2019	2020	2021
Fleets in Operation	99	116	144	164	156	131	51
Passenger Carried (in Millions)	25,7	29,3	33,1	37,3	36,2	6,87	3,14

Source: Norwegian Annual Report (2015-2021)

Norwegian has increased its number of aircrafts in its operation from 99 aircrafts in 2015 to 164 aircrafts in 2018, with the increase in number of aircrafts we can see the number of passengers carried by Norwegian airlines have also increased. The examples of the new aircrafts in Norwegian's fleet are Boeing 787 Dreamliners, 737-Max, etc.

2.4 Finnair and Norwegian airlines in competitive market

Finnair and Norwegian airlines both are providing short haul as well as long haul services. Depending upon the flight distance these airlines are considered as low-cost carriers and full-service carriers. Short haul services are provided within Europe however, long haul services are

provided within and outside of Europe. Norwegian airlines have been providing more low-cost fares to its customers and the number of fleets operated are higher compared to Finnair. Due to this reason Norwegian airlines benefited from higher load factor and available seat kilometers. The passenger and freight traffic between Asia and Europe are essential to Finnair's business model.

Finnair being the airline network for cargo traffic besides carrying passengers between Asia and Europe, it has gained the benefit of higher revenue from cargo. This implies Finnair during the travel restrictions imposed in 2020 due to COVID-19 pandemic in which the high demand of the global supply chain contributed 40% percent of the total revenue in the year 2021. However, Norwegian airlines operating mainly for passenger transport before the pandemic as well, the company didn't get the benefit of revenue from cargo transport. Norwegian airline is also financially struggling as the net profit since the year 2017 has fallen to negative value meanwhile the company has been growing the aircraft number in its fleet. For instance: 11 new Boeing 787-9 Dreamliners and 12 new Boeing 737 Max in 2017 due to which their available seat kilometers increased from 58.00 in 2016 to 72.34 in 2017. The company is emphasizing more on providing affordable fares with high quality flight and friendly services, freedom of choice and low-cost product to price sensitive customers and offers new routes and destinations to desired markets. (Norwegian Annual Report, 2017)

Finnair as its core strength to compete in the competitive market received the award of best airline in Northern Europe for the 11th consecutive years in the Skytrax World Airline in 2021. In addition, the best European Airline in China, TripAdvisor's Travelers' choice award in the major Airline Europe-Category, five-star global airline rating (APEX) based on customer reviews and so on in 2018. On the other hand, Norwegian achieved the award of Europe's best low-cost airline for the 6th consecutive year in 2020. Furthermore, it received the World's best low-cost long-haul airline for the 5th consecutive year according to Skytrax in 2019. (Finnair and Norwegian Annual Report, 2019,2020 and 2021)

3. FINANCIAL RATIO ANALYSIS OF FINNAIR AND NORWEGIAN AIRLINES (2015 – 2021)

This chapter comprises the analysis and comparison of the selected liquidity, solvency, profitability and activities ratios of Finnair and Norwegian airlines from the selection period of 2015 to 2021.

3.1 Liquidity ratio analysis

Analyzing the liquidity of Finnair and Norwegian Airlines reflects the ability to their meet short term obligations. To do so, the current ratio and quick ratio for both companies are calculated for the year 2015 to 2021. The value greater than 1 for both ratios is generally considered as a good indication of financial stability of the company to meet its short-term obligations.

Table 3. Liquidity Ratio of Finnair and Norwegian Airlines (2015-2021)

Liquidity Ratios	**Years / Airlines**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Quick Ratio	Finnair	1,10	1,29	1,26	1,16	0,96	1,50	1,19
	Norwegian	0,47	0,42	0,55	0,42	0,60	0,34	1,66

Source: Author's own calculations from appendix 5

For the selected period, Finnair has shown less liquidity problems as the current and quick ratio are greater than 1 except the quick ratio in the year 2019 which is 0.96. the year 2020, indicating better liquidity levels, which means that the company was able to cover its short-term obligations. Similar trend continues in the following year 2021 as well. On the other hand, Norwegian Airlines have had liquidity problems since the year 2015 to 2020. Both the current and quick ratios for the corresponding period were below 1. Which means that the available current assets of the company were not enough to cover its short-term financial obligations. Over the period of seven years the company was able to increase its liquidity in the year 2019 reaching the value to 0.61 in which trade and other receivables increased to 10132.9 million Nok from 6752.6 million Nok in 2018. However, since Norwegian entered into Examinership in 2020, the

company reduced its operation aircrafts resulting in reduced inventory of 16.3 in 2021 so the quick and current ratio reached to 1.66.

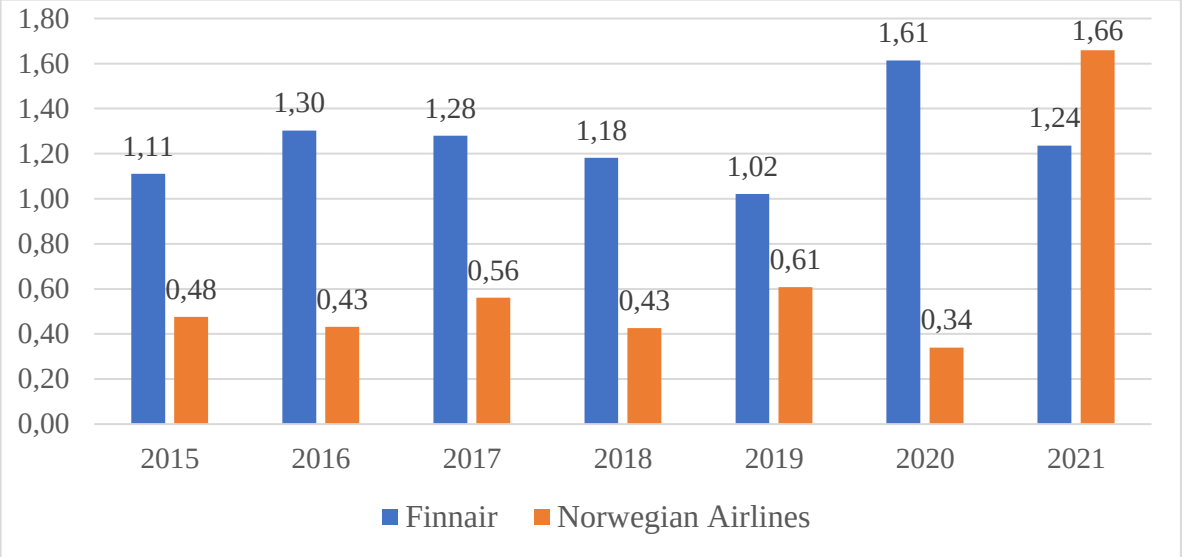

Figure 2. Current ratio for Finnair and Norwegian Airlines (2015-202)
Source: Author's own calculations from appendix 5

The lower liquidity ratios for Norwegian airlines until 2020 was because of the increase in current liabilities, for instance; addition of new aircrafts in the fleet such as three new 787-9 Dreamliners, financing for seven 737-800 airplanes as well as eight 737 MAX 8 in the year 2017 and 2018. Also, there is an increase in trade and other payables but decrease in cash and cash equivalents until 2020. However, Finnair has kept the liabilities such as trade payables, interest-bearing liabilities lower over this period. The inventory for Norwegian was relatively higher compared to Finnair which is also the reason for lower quick ratio for Norwegian. The higher inventory for Norwegian was because of consumable parts for heavy maintenance leading to weak inventory planning compared to Finnair. Aircraft parts are quite expensive and the maintenance of them also cost a higher amount, which caused Norwegian airlines high cost to operate flights, also buying and storing the aircraft parts cost warehouse as well as insurance cost as well. This led Norwegian to be in a liquidity problem not being able to pay its financial obligations.

3.2 Asset management ratio analysis

Asset management ratio is analyzed using the asset turnover ratio and receivables turnover ratio to see how effectively the assets are utilized to generate revenue. Higher utilization of assets to generate less revenue leads firms to financial deficiency.

Table 4. Asset Management ratio for Finnair and Norwegian Airlines (2015-2021)

Asset Management Ratios	**Years** / **Airlines**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Asset Turnover Ratio	Finnair	1,14	0,95	0,92	0,99	0,81	0,24	0,22
	Norwegian	0,71	0,69	0,71	0,72	0,51	0,74	0,27

Source: Author's own calculations from appendix 5

From the above table, the asset turnover ratio for both companies followed a similar trend during the selected period from 2015 to 2021. In comparison their difference is marginal, and the ratios are decreasing over the study period. Finnair had the highest asset turnover ratio of value 1.14 in 2015 and reached lowest of 0.22 in 2021. Similarly, Norwegian had a starting value of 0.71 in the beginning year and acquired 0.27 in 2021. For Finnair, cash and cash equivalents and other financial assets are the major portion of assets and the sales have consistently increased from 2015 to 2019, however, during the COVID-19 pandemic since 2020 sales have decreased due to the travel restrictions. The decreasing value of asset turnover ratio for Finnair is from 2015 until 2019 is Finnair was launching an investment plan to replace aircrafts A340 by new airbuses A340. During the year 2017, 7.5 million euros were capitalised and in the year 2018, 9.5 million euros were capitalised for the introduction of new airbuses A340 to its fleet.

In case of Norwegian, the asset turnover ratio is comparatively lower to Finnair for all the 7 years as most of the asset portion consists of trade and other receivables and cash and cash equivalents. In relation to addition of aircrafts to its fleet, Norwegian had a high amount of prepayment to aircraft manufacturers. For instance, prepayment for aircraft manufacturers in 2017 decreased to the value of 5,219.4 NOK million from 7156 NOK million which slightly contributed to increase its asset turnover ratio from 0.69 in 2016 to 0.71 in 2017. In correspondence with the decreased sales due to the COVID pandemic in 2020, the company sold its aircrafts for instance: ten 737-800 for the company's restructuring process as well as

offsetting the short-term lease liabilities. Due to which the ratio increased to 0.74 in the year 2020 but same as Finnair the ratio has decreased in 2021 due to the travel restrictions imposed. In addition, Norwegian has consecutively increased the amount for aircraft, parts and installations on leased aircraft.

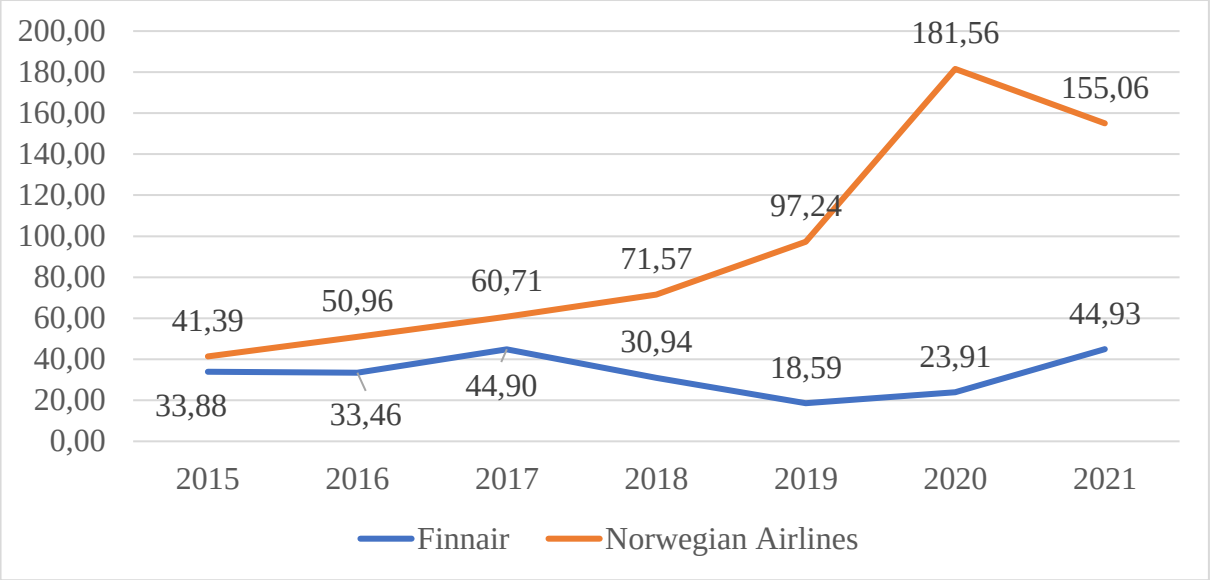

Figure 3. Days Sales Outstandings for Finnair and Norwegian airlines (2015-2021)
Source: Author's own calculations based on Appendices 1, 2, 3, and 4

Looking at the days sales outstanding, it can be seen that Finnair has a shorter accounts receivables period that Norwegian airlines during the selected period of 2015 to 2021. This shows that Finnair is able to secure its debt on time, has less cash flow problems and can pay its liabilities quickly. Finnair's lowest DOS was 18.59 days in 2019 followed by the decrease in average receivables in the year 2018 and also in 2019. The decreasing trend has been followed in the year 2020 and 2021 but due to the impact of COVID-19 pandemic sales also decreased and reached the highest of 44.33 days in 2021. In contrast, Norwegian DOS has highly fluctuated over the study period starting from 41.39 days in 2015 to reaching the highest of 181.56 days in 2020. Norwegian has high credit exposures to travel agencies for sale of tickets and to its commercial customers as well as the amount held back from credit card users. The credit card receivables in 2015 was 942.65 NOK million and reached the highest of 5797.4 NOK million in 2019. The highest value of 181.56 days on 2020 was followed by the decrease in sales though the credit card receivables decreased to 1776.1 NOK million. Hence, Norwegian has a weaker credit policy to collect its debt and is facing problems in settling their financial obligations.

3.3 Debt management ratios analysis

Debt management ratios are very important factors in determining the financial status of a company by measuring its ability to repay long-term obligations. Like liquidity ratios, Debt management ratios also evaluate the financial stability of a company, Liquidity ratios measure the ability to cover short-term obligations whereas, debt management ratios measure the ability to cover long-term obligations.

From figure 4, it can be seen that the debt to equity ratio for Finnair stayed below 2 for the period from 2015 to 2019 which increased to the highest of 7.51 in 2021.The interest bearing liabilities has increased over the study period in which the interest bearing liabilities in both current and non-current liabilities in 2015 was 75.5 and 271 million euros. In 2020, Finnair had the highest non-current debt of 1111,0 million euros so the ratio has also increased to 3.07 However, in the year 2021, current debt has hiked from 51.5 in 2020 to 441.5 million euros in 2021, hence reached the debt-to-equity ratio of 7.51.

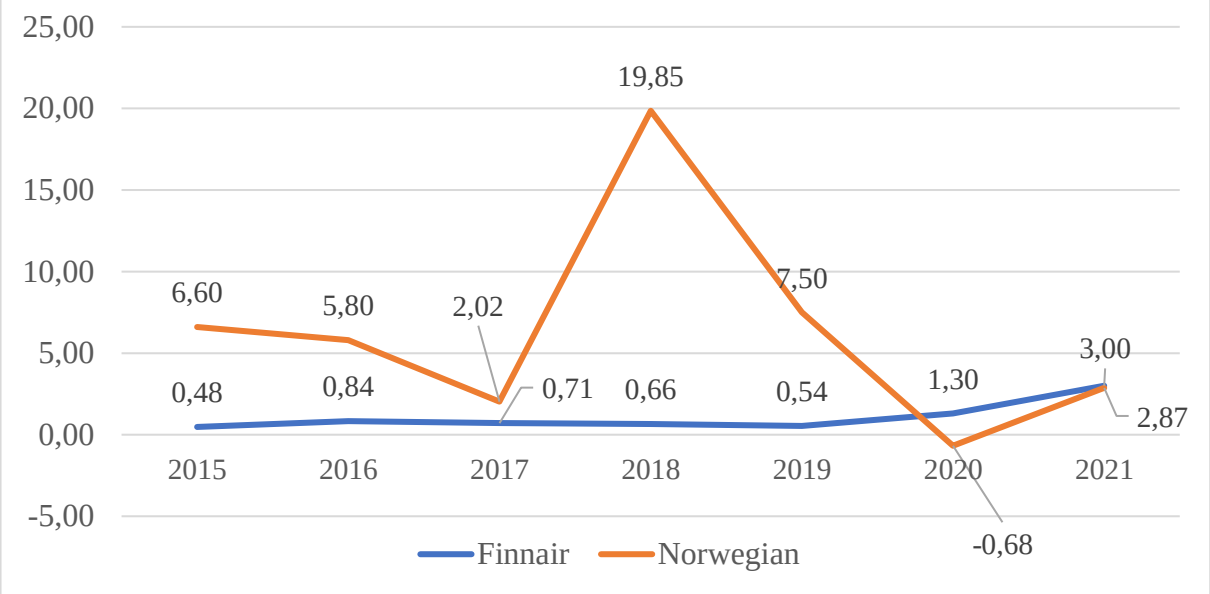

Figure 4. Debt to Equity for Finnair and Norwegian Airlines (2015-2021)
Source: Author's own calculations from appendix 5

Norwegian on the other hand is always in the riskiest position during the selected time frame. The debt-to-equity ratio started from 6.60 in the year 2015 which is way higher compared to Finnair, but the ratio again reached to the highest value of 19.85 in the year 2018. In 2015 the borrowings in the non-current liabilities amounted to 16543.4 million Nok, however there were

no long-term borrowings taken in 2018 but only short-term borrowing of 4244.5 million Nok due to which the ratio has decreased to 2.02. In contrast, during 2018, the company had total borrowings of 33839.1 million Nok, so the ratio has reached 19.85. The decrease in borrowings over the period till 2021 has also decreased the debt-to-equity ratio to the value of -0.68 in 2020. (Norwegian Annual Report, 2020)

During the year 2018, Finnair and Norwegian adopted IFRS 16 leasing standard which has made structural changes in their consolidated financial statements i.e., income statement, balance sheet and cash flow statement. Due to adaptation of IFRS 16, Finnair recognized right-of-use fleet and right-of-use other fixed assets in its assets side whereas in the liabilities side lease liabilities were adopted. The adaptation of the new accounting standard by Finnair increased the assets by 996.3 million euros and liabilities by 1099.5 million euros. In contrast, equity decreased by 103.2 million euros. The change in new accounting standard increased the debt to equity (Finnair restatements and Annual report, 2019)

On the other hand, Norwegian airline recognized the right-of-use equipment and right-of-use buildings in its assets and lease liabilities are recognized in liabilities side. However, there is no difference reported due to the adaptation of the new accounting standard. (Norwegian Annual Report, 2019)

3.4 Profitability ratios analysis

In this chapter, to analyse the profitability of Norwegian and Finnair, Return on Assets ROA), Return on Equity (ROE), and Net Profit Margin ratios are calculated. Using these ratios profitability is computed to see how much profit is generated by a business from its assets, equity, revenue, trading, and investments. Those ratios calculated from 2015 to 2021 are discussed below.

The graph for Finnair shows that it has higher ROA ratios in comparison to Norwegian from the year 2015 to 2019. However, in the year 2020 and 2021, Finnair is not profitable, its ROA went down to -14.35% and -11.47%. Norwegian by contrast in the year 2021, due to reconstruction after successful completion of examinership gained the growth of 9.94% though it had -187.37% in 2020. This indicates that Finnair was able to mobilize its assets only until 2019 and Norwegian at the same time it utilized efficiently only in the year 2016 and 2021 with the value of 3.01%

and 9.94%. From 2015 to 2021, Finnair has an increasing trend in its total assets but in 2020 and in 2021 they are again highly decreased due to the lower sales caused by the COVID-19 wave and restrictions which caused cancellations of flights and paid ticket refunds was 464 million euros.

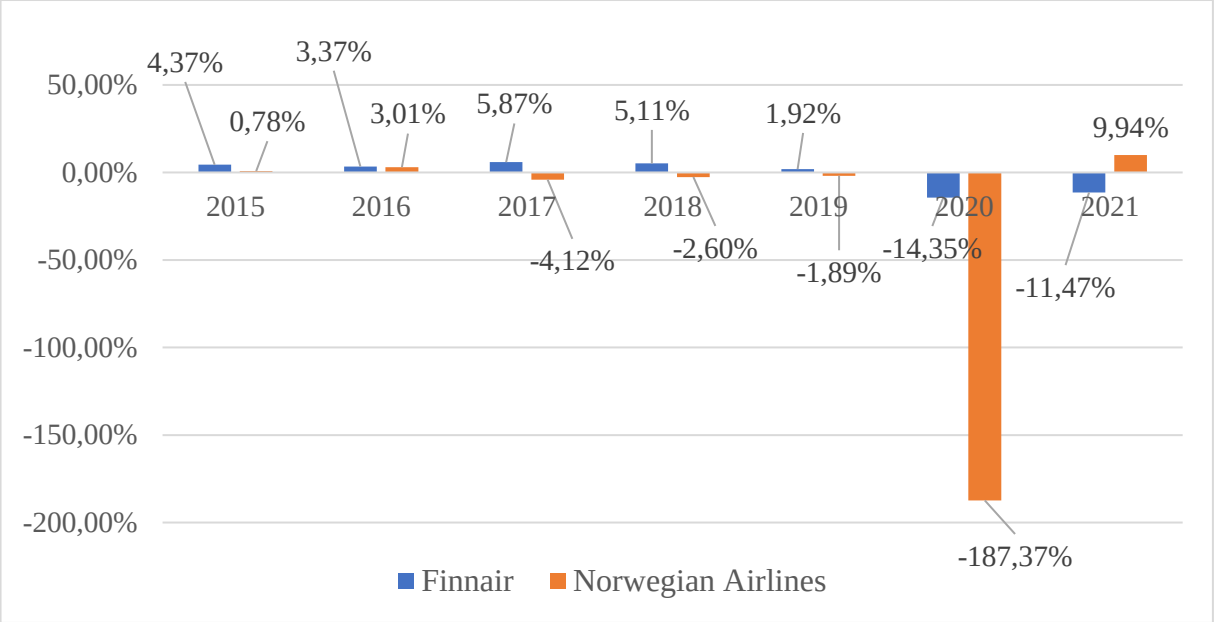

Figure 5. Return on Assets for Finnar and Norwegian Airlines (2015-2021)
Source: Author's own calculations from appendix 5

Norwegian's ROA remained lower till 2020 and it was suffering from huge loss as its ROA was comparatively lower to Finnair. This drop in 2020 to -187.37% was also due to COVID-19 pandemic which imposed travel restrictions, flight cancellations and airplanes were grounded. Furthermore, Norwegian was not able to achieve a positive ROA ratio from the year 2015 to 2020 because of purchase of new aircrafts to its fleet as well as heavy maintenance of aircraft parts. However, in the year 2021, Norwegian increased its operational fleet number to 51, whereas only 15 aircrafts were operated out of a total 131 fleet in 2020. This increased the sales compared to previous year from 2020, so the sales were comparatively increased.

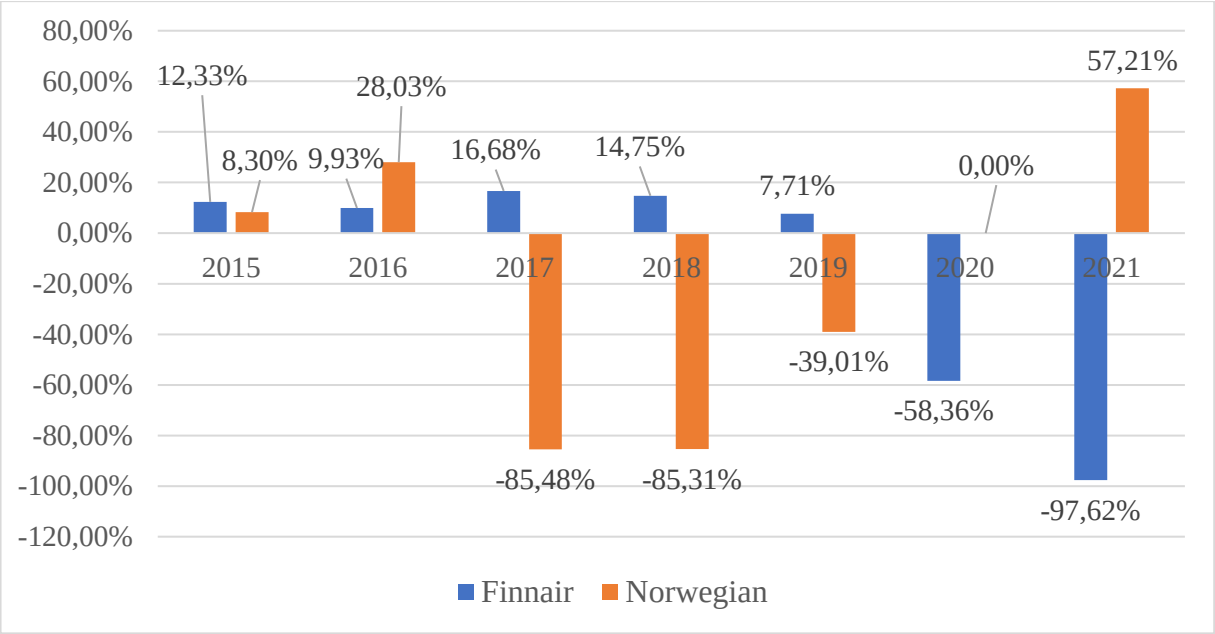

Figure 6. Return on Equity for Finnair and Norwegian Airlines (2015-2021)
Source: Author's own calculations from appendix 5

Like ROA, ROE for Finnair stayed positive for five years from 2015 to 2019. Positive ratio of 12.33% was in the beginning year 2015, which increased slightly to 16.68% in 2017 and then reached a positive lowest of 7.71% during the selected period. However, like ROA, ROE for Finnair dramatically decreased to -58.36% in 2020 and to -97.62% in the year 2021. The declining ROE suggests that Finnair was less efficient in making more profits compared to previous years as well as there was a decline in share prices to 0.76 euros per share at the end of financial year 2020, however in 2019 the share price recorded was 1.08 euros. Similar trend has followed in the year 2021 in which closing price per share reached 0.60 euros which was even lower than in previous year.

In contrast to Finnair, Norwegian air was only in a stable position only for 3 years out of 7 years, in 2016, in 2020 and in the last year 2021. Even though it secured a positive 28.03% in 2016 this ratio is comparatively lower than that of Finnair for those years it has positive value. But from the year 2017 to 2019, the ROA ratio for Norwegian plunged to -85.48% in 2017 and in 2019 it reached -39.01%. However, in the year 2020 Norwegian airlines was able to generate huge profits from their equity compared to previous years and to Finnair as well. During the 2020, Norwegian incurred a loss amounting to 23039.8 million NOK. This resulted in a negative total equity value as well, due to which the ROE ratio for the corresponding year is positive despite net loss. However, in 2021 the company was able to make profit resulting in better ROE.

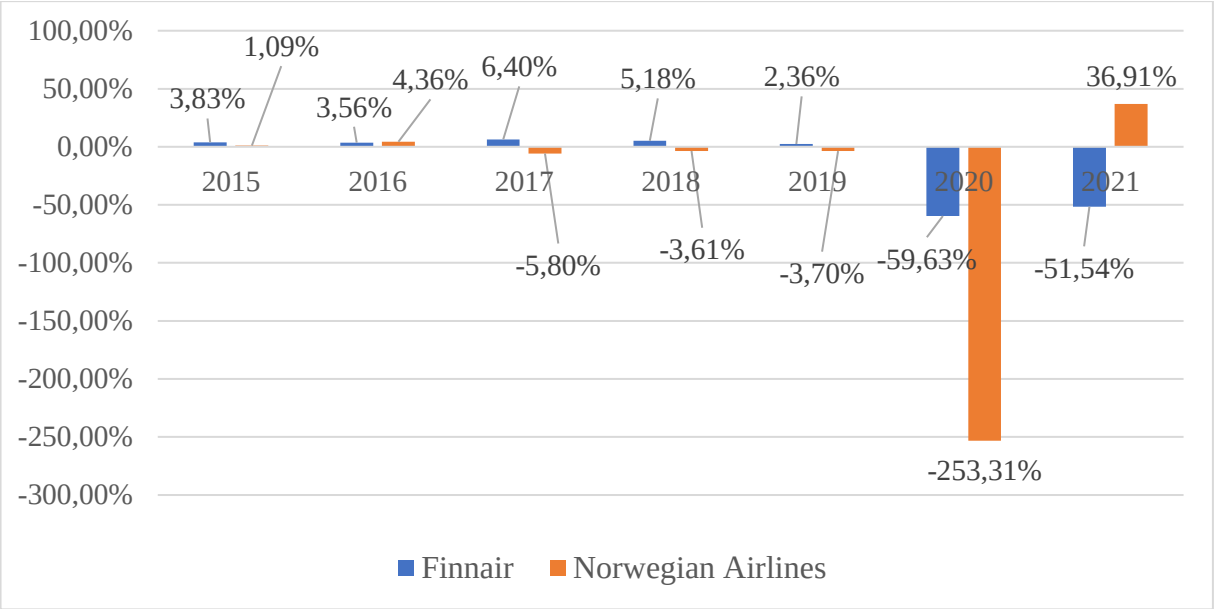

Figure 7. Net Profit Margin for Finnair and Norwegian Airlines (2015-2021)
Source: Author's own calculations from appendix 5

Like ROA and ROE, Similar positive trend was followed by Finnair from the year 2015 to 2019 for net profit margin, i.e., remained positive till that period and then dropped to the negative ratio in the year 2020 and 2021. Though the ratios are positive from 2015 to 2019, their ratios are quite small with the average of 3.83% in each year which indicates that Finnair was able to earn only 0.03 euros profit for every euro of revenue gained. These positive ratios turned to negative profit margin in the year 2020 and 2021, the ratio comprising -59.63% and -51.54%. The decrease in the net profit margin from 2.36% in 2019 to -59.63% in the year 2020 is mainly due to the reduction in the sales caused by the COVID-19 pandemic.

Like Finnair, Norwegian airlines was not able to secure the profitable ratios for net profit margin over the selected period. Only for 3 out of 7 years Norwegian has acquired a positive net profit margin. The ratio of 1.09% was in 2015 which slightly increased to 4.36% in 2016 which then highly decreased over the period to -253.31% in the year 2020. This shows that Norwegian reported a loss of -253.31 NOK in every 1 NOK sale. Reportedly the company faced loss in the year 2017 and 2018 as well. However, the company has progressive report in the year 2021 with a positive net profit margin ratio of 36.91%.

3.5 Airline specific financial ratios analysis

This chapter comprises the performance analysis of airline specific metrics; available seat kilometers (ASK), revenue passenger kilometers (RPK) and load factor (LF). These ratios are specifically designed for airline industries to determine the operational profits by using its assets in an efficient way.

Table 5. Airline Specific ratio for Finnair and Norwegian Airlines (2015-2021)

Airline Specific Ratios	**Years / Airlines**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Revenue Passenger Kilometers	Finnair	25,59	27,06	30,75	34,66	38,53	8,15	5,17
	Norwegian	42,28	50,79	63,32	85,12	86,61	13,68	6,86

Source: Annual reports of Finnair and Norwegian Airlines (2015 – 2021)

Finnair has achieved an increasing trend for both available seat kilometers and revenue passenger kilometers between 2015 to 2019. ASK started with 31.83 million and increased over the period to reach its highest value of 47.18 in the year 2019. Similarly, RPK started with the value of 25.59 in 2015 and hiked to the value of 38.53 in 2019. The reason behind this is due to the increase in the number of passengers; the number of passengers was 10.29 million in 2015 reaching the high record of 14.7 million passengers in 2019. However, due to the COVID-19 pandemic and its travel restrictions the number of passengers carried by Finnair reached 3.5 million causing the ratio to fall to value 12.93 in 2020, following year number of passengers carried reduced to 2.9 million to reach the lowest ratio of 12,09 in 2021. Passenger revenue also decreased to 8.15 in 2020 and 10 5.17 in 2021 due to the allowance of limited passengers to be carried per flight.

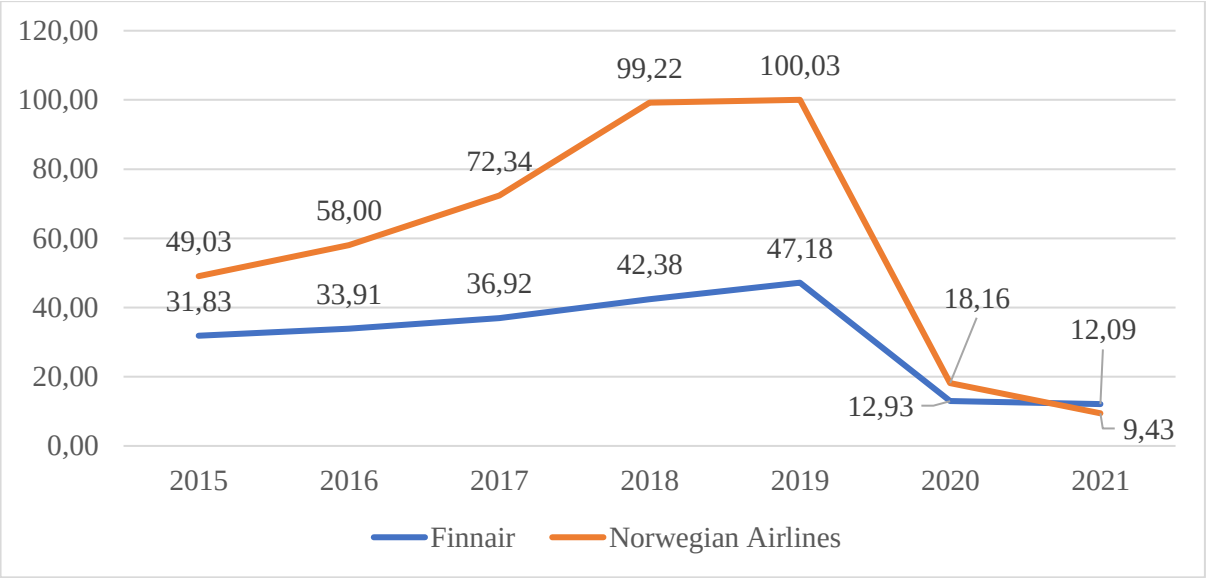

Figure 8. Available Seat Kilometers for Finnair and Norwegian Airlines (2015-2021)
Source: Annual reports of Finnair and Norwegian Airlines (2015 – 2021)

Norwegian has been growing available seat kilometers and revenue passenger kilometers from 2015 to 2019. Available seat kilometers started from the value of 49.03 in 2015 and followed an increasing trend to reach the value of 100.03 in 2019. This trend is also followed by revenue passenger kilometers starting from the value of 42,28 in 2015 to reach the highest value of 86,61 in 2021 as Norwegian introduced new aircrafts to its fleet and added new destinations. However, due to the global COVID-19 pandemic both the ratios fell down reaching the lowest available seat kilometer of value 9.43 and revenue passenger kilometers 6,86 in 2021.

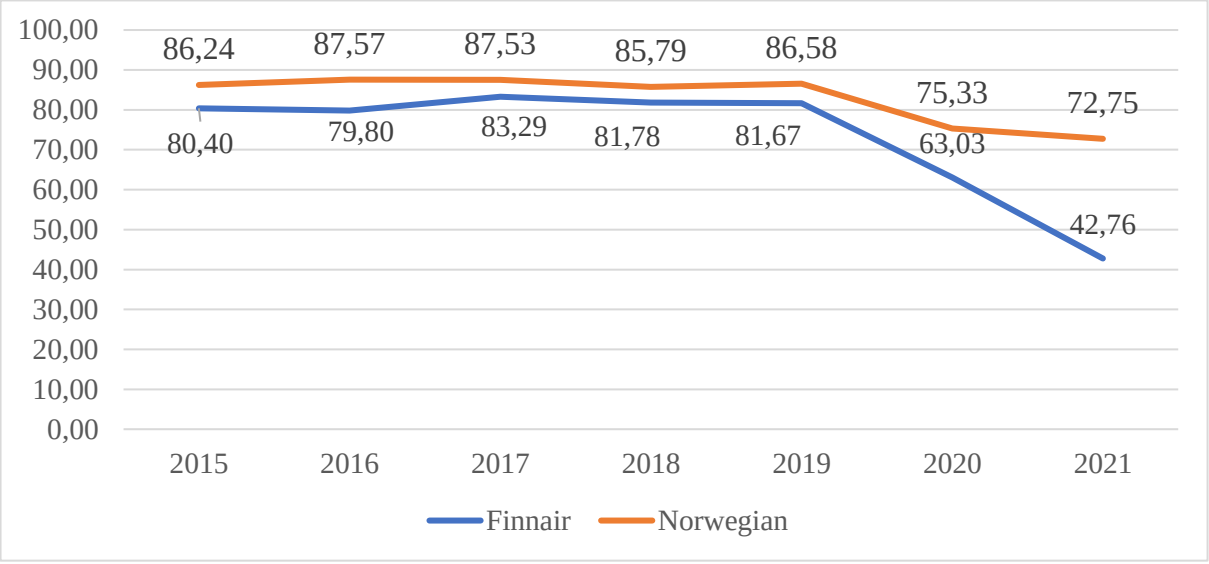

Figure 9. Load Factor for Finnair and Norwegian Airlines (2015-2021
Source: Author's own calculations from appendix 5

Both of the airlines have faced reduction in the load factor in 2020 and 2021 due to the COVID-19 pandemic reaching the lowest value of 42.76% for Finnair and 72.75% for Norwegian during the year 2021. However, looking at the trend from 2015 to 2019, there hasn't been drastic fluctuation on the load factor for both companies. In comparison, Norwegian's load factor is higher than Finnair meaning that the Norwegian was carrying more revenue passengers and available seat kilometers was high due to the introduction of 17 Boeing 737-800, nine 787-9 Dreamliners as well as 737 MAX 8 in their fleet. Norwegian's load factor in the year 2015 was 86.24% which slightly increased to 87.57% in 2016 and remained on the same line to the value of 86.58% in 2019.

On the other hand, Finnair's load factor remained low during the selected period, starting from the value of 80.40% in 2015. Setting a new record of passenger every year, Finnair has increased its load factor to 83.29% in the year 2017 as added four new Airbus A350 and leased seven new Airbus A321 in its fleet. reached 81.67% in the year 2019 slightly decreased from the previous year, however after that both airline's load factor has decreased. Norwegian's load factor is in quite a stable position whereas Finnair is struggling a bit during the examination period.

Finnair being in a stable position regarding liquidity, it can still be suggested to slightly increase its current assets to cover its current liabilities. For instance, more liquid assets cash and cash equivalents have decreased over study period for Finnair, additionally trade and other receivables are also fluctuating. When it comes to Norwegian airlines, it has highly suffered in liquidity, as the company is not able to pay its short-term obligations. So, Norwegian should approach to match its current assets to the same level as Finnair.

In terms of Profitability, due to the concept of low-cost short haul as well as long haul flights and higher number of fleets in operation, though the company is operating more and selling more tickets still Norwegian airlines is lagging in profitability. On the other hand, Finnair was getting benefitted from cargo transport along with passenger transport due to which though sometimes the company suffered from less passenger travel demands still the company was operating and generating profits. Hence, Norwegian should also practice several operational tactics to generate profits even during the times when there are less demands of people for travel.

3.6 Altman bankruptcy analysis

From Table 6, Finnair's Z-score is greater than 1.10 from the year 2015 to 2018 which shows that the company is in safe zone. However, from 2019 to 2021 the value stays lower than 1.10 which implies that the company has a risk of bankruptcy. In the year 2019, the value for X_1 has decreased to 0.01 from 0.07 in 2018 the reason behind this is due to the current assets decreased to 1249.2 million euros from 1392.5 million euros. This shows that Finnair did not have enough current assets to pay its short-term debts as per the total assets of the company. In addition, the EBIT to total assets ratio has also decreased to 0.04 in 2019 and -0.13 in 2020. The EBIT for Finnair 207.5 million euros in 2018 decreased to 160 million euros in 2019 and to negative of 464.5 and 454,4 million euros in 2020 and 2021. This reflects that the Finnair is not able to pay its tax and interest liabilities in proportion to its assets. Additionally retained earnings to its assets ratio has also reached -0.10 in 2021 reflecting the company is not able to accumulate earnings from its assets due to the declining business activities caused by the COVID-19 pandemic. Having the less retained earnings to assets ratio, Finnair is also not able to reinvest for further activities.

Table 6. Altman's Z-score value for Finnair (2015-2021)

Years / **Finnair**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
(X1) Working Capital/Total Assets	0,05	0,11	0,11	0,07	0,01	0,10	0,07
(X2) Retained earnings/Total Assets	-0,01	0,01	0,04	0,04	0,04	0,05	-0,10
(X3) EBIT/Total assets	0,06	0,05	0,08	0,07	0,04	-0,13	-0,11
(X4) Book Value of Equity/Total liabilities	0,55	0,51	0,54	0,53	0,33	0,33	0,13
Z-score = 6.56X1 + 3.26X2 + 6.72X3 + 1.05X4	**1,30**	**1,60**	**1,92**	**1,65**	**0,80**	**0,30**	**-0,48**

Source: Author's own calculations based on Appendices 1 and 2

From below table no. 7, for all the selected period Norwegian airline's Z-score is below 1.10 which shows that it is financially struggling and under bankruptcy. During this financially

distressed period, Norwegian hence entered into an examinership and reconstruction process in Ireland and Norway in 2020 as the Norwegian government is no longer providing any financial support to Norwegian airlines. During the examination period, the net working capital to assets ratio is negative which reflects that Norwegian has fewer current assets to pay its current liabilities. In 2020, this value reached the highest value of -1,05 which was triggered by the recent COVID-19 pandemic and during this time Norwegian applied for bankruptcy protection. The ratios X_2, X_3 and X_4 are also negative during 2020. Despite the high investment of Norwegian airlines in new aircrafts their EBIT has decreased adversely since 2017, decreased from 1820.4 million NOK in 2016 to -2002.1 million Nok in 2017. The EBIT even decreased highly in 2020 reaching the value of -23768,4 million Nok. Comparing the retained earnings Norwegian had for further reinvestment, in 2015 it had 759.6 million Nok which has increased to 1919,3 million Nok in 2016 but then the value has followed a decreasing trend. For instance, in 2019, the value of retained earnings reached -3814.0 million Nok, however, the prepayment to aircraft manufacturers in the same year was 4946.6 million Nok. Due to which the Z-score of Norwegian is -27.43 in 2020. However, after successful completion of examinership and reconstruction process in 2021, this value has slightly progressed to 0.59, during the examinership process the company rejected the contract with Airbus on the delivery of 88 aircrafts in 2021 and as a part of reconstruction process the company has reduced the number of fleets to 51 in 2021 from 131 fleets in 2020. Furthermore, Norwegian planned to focus on operating the European short-haul network with narrow body aircrafts in Europe. During the reconstruction process the capital raised has increased from 4.5 billion Nok to 6 billion Nok.

Table 7. Altman's Z-score value for Norwegian Airlines (2015-2021)

Years / Norwegian	2015	2016	2017	2018	2019	2020	2021
(X1) Working Capital/Total Assets	-0,18	-0,20	-0,17	-0,28	-0,11	-1,05	0,21
(X2) Retained earnings/Total Assets	0,02	0,05	0,00	-0,04	-0,04	-2,19	0,00
(X3) EBIT/Total assets	0,01	0,05	-0,05	-0,07	0,01	-1,93	-0,15
(X4) Book Value of Equity/Total liabilities	0,10	0,12	0,05	0,03	0,05	-0,43	0,21
Z-score = 6.56X1 + 3.26X2 + 6.72X3 + 1.05X4	**-0,91**	**-0,71**	**-1,34**	**-2,41**	**-0,75**	**-27,43**	**0,59**

Source: Author's own calculations based on Appendices 1 and 2

Based on the different ratios used in Altman's Z-score analysis, few suggestions can be provided by the author to Norwegian airlines to improve the liquidity ratio. As it is seen from the table no. 7, that the net working capital ratio is negative for six consecutive years. Meanwhile the company had higher investment in the aircrafts as well and for maintenance of leased aircrafts. In other words, compared to the availability of current assets, the short-term obligations are higher which means Norwegian is not using its available assets properly to generate revenue. This causes a huge loss to the company in the long run due to the interest added in the capital payment. So, Norwegian airlines should concentrate on balancing its liabilities to its assets.

3.7 Findings

The impact of globalization has increased the tourism sector, increase in competition, rise in the world's economy, diversified market and workforce, transfer of information and technology, the airline industries are also gradually gaining the benefit of globalization. The attraction of people towards tourism destinations, exploring new places due to the flights offered by the low-cost airlines and the transport of cargo, the demand for low-cost airlines is boosted. These airline companies are also working to magnify their services to meet the high customer demand by

adding new modern aircrafts to their fleet, new destinations and price reduction acquired with high load factor. However, the recent COVID-19 pandemic incurred high loss to airline companies as well, so to examine the financial performance of Finnair and Norwegian airlines before and during the COVID-19 pandemic for the year 2015 to 2021 are analyzed with the help of financial ratios. For the analysis, data are taken from the financial statements, financial ratios, airline specific ratios and Altman's Z-score are used. Based on the analysis the company's strength and weakness can be revealed with answers to the research questions.

First research question is ''How do the financial and airline-specific ratios be useful to evaluate the financial performance of two airline companies?'' In general, financial ratios are the figures represented by two or more items from the financial statements which gives the numerical value to evaluate the financial position of a company. The numerical values of financial ratios can be compared with previous year's values known as horizontal analysis and similar items of the financial statements can be compared with in the same year as well to prior year in case of comparison among two companies. It gives an overview to the investors, managers of the company as well as the competitors to see where the company stands by comparing it to another company. In this paper two companies from the same region, Finnair, and Norwegian airlines, are studied and analyzed by using financial as well as airline specific ratios to see their market position in every aspect. Data for the study is taken from the period of 2015 to 2021 in which there are two scenarios: financial performance before COVID-19 Pandemic before the year 2020, and during the COVID-19 pandemic till date after the year 2020.

The liquidity, profitability, asset management, market value, debt management and airline specific metric ratios are calculated and compared in this paper. Based on the calculation, the financial ratios clearly show the financial performance of two airline companies, as both companies are using International Financial Reporting Standards (IFRS) for their financial reporting, their performance is comparable. For instance, both companies had an increasing trend for revenue before COVID-19 pandemic, however, they suffered very highly after that due to which their liquidity ratios are affected. In contrast, Finnair has better liquidity than Norwegian airlines even before the COVID-19 pandemic. Furthermore, Norwegian has higher days sales outstanding ratio due to high credit exposures to travel companies and higher amount was held back from credit card users. This effect also applies to ASK, RPK as well as load factor for both airlines. The increasing trend for airline specific metric ratios seen has gradually decreased. But the Norwegian airlines providing more low fare flights to more locations has

achieved higher ASK and RPK ratios as well as the load factor is also higher than Finnair. Hence, comparing the ratios horizontally for both airlines during the examination period, the above-mentioned aspects are prominent to disclose that the financial ratios are useful to analyze the financial performance of two airline companies.

The second research question is ‘‘Which company is better in comparison to liquidity, profitability, solvency, and efficiency before and during the COVID-19 pandemic? Based on the liquidity ratios analyzed in this study current and quick ratios for Finnair are mostly higher than 1 even before and during the COVID-19 pandemic, however, the liquidity ratios for Norwegian airlines are below 1 during the study period which indicates that Norwegian has liquidity problems to cover its short term obligations. In addition, the net working capital ratio from Altman’s z-score analysis, Norwegian had negative ratio of net working capital for 6 years during the study period however Finnair has had better position. Which means that Norwegian has less current assets to pay for its current liabilities though it has been adding new aircrafts to its fleet.

Norwegian airlines has had inconsistencies regarding the return on equity, return on assets and net profit margin. Profitability of Norwegian, out of 7 years there were positive outcomes only for 3 years. Due to the high operating expenses and high investment in new aircrafts the profit margin for Norwegian airlines decreased. Finnair has negative profitability only during the COVID-19 pandemic. During 2020, the total equity of Norwegian airlines is negative so the ratio for return on equity is not compared which led the company to apply for bankruptcy protection and financial reconstruction. The lower debt to equity ratio for Finnair showed that it had less liabilities and was effectively using its assets to purchase new aircrafts. Hence, Finnair is better in profitability in comparision to Norwegian airlines even before and and during the COVID-19 pandemic. Finnair has a shorter debt collection period during the study period in comparision to Norwegian airlines which means that Finnair does not have problems to collect their receivables in time. Looking on to the EBIT ratio from Altman’s Z-score analysis the EBIT ratio for Norwegian airline is comparatively lower and has had negative for 4 out of 7 years however, Finnair has had negative only during the COVID-19 Pandemic.

The final research question is ‘‘What is the effect of COVID-19 on the financial performance of the airline companies?’’ The financial as well as the airline specific ratios analyzed during the study period from 2015 to 2021, looking into the scenario during the COVID-19 pandemic,

both the companies are adversely affected in their financial performance. Though Norwegian airlines was financially struggling before the pandemic, there are adverse effects caused by the COVID-19 pandemic. The travel restrictions caused lower sales of flight tickets due to which the revenue has decreased. Though Finnair was financially stable during the study period, after the pandemic started the operational aircrafts as well as the destinations were reduced. This applies to Norwegian airlines as well whose operational aircrafts decreased to the lowest of 51 aircrafts in 2021. Additionally, the impact of pandemic is also evident on the load factor, RPK and ASK due to less aircrafts and destinations.

Though the financial and airline specific financial ratios are the ideal tools for evaluation of the financial performance of the companies, there are some limitations while doing the ratio analysis. The information about the company's financial performance is taken from their respective websites and the ratios are calculated based on available information. To have more comprehensive analysis, the selection of suitable financial ratios is more required. For instance, for the service providing industries the inventories may be less or not at all, because of which analyzing inventory turnover ratio is not possible. Furthermore, window dressing of financial statements by the company may not provide the accurate position of the company's performance.

CONCLUSION

The aim of the study was to analyze the financial performance and bankruptcy analysis of the airline industries by setting up the theoretical background of the financial as well as airline specific ratios used. The comprehensive ratio analysis in this study provided delegate financial time series performance regarding its liquidity, profitability, solvency, and efficiency

The analysis done in this paper and its result will enable the potential investors, shareholders, and the company's management aspect to evaluate the financial performance of these companies and seek better management prospects. The ratio analysis in this study shows how effectively the firms are using its assets to generate profit. The comprehensive ratio analysis also provides delegate financial time series performance regarding its liquidity, profitability, solvency and efficiency. Due to the COVID-19 pandemic the airline industry is one of the highly affected industries in the world. The travel restrictions imposed and the safety measures to be followed during the pandemic had caused the company to compensate for the flight cancellation, payments to the aircrafts lease though the flights were suspended. Until the end of year 2021, the travel restrictions to reduce the spread of coronavirus, airlines companies were not allowed to board the passengers to full capacity of aircraft. This led the airline companies to suffer from high operating cost and less revenue.

However, travel restrictions nowadays are gradually in the phase of mitigating and the number of vaccinated peoples are increasing because of which the airlines companies are allowed onboard passengers to the maximum capacity of aircrafts. The author wants to suggest further study on this topic to see the performance even after the ease of travel restrictions. Moreover, the financially struggling company Norwegian airlines has been through major financial reconstruction, though the performance before COVID-19 pandemic was challenging for it, the future performance may not be the same as before. In addition, the further study of these companies after the pandemic will also show how the companies are handling its financial problems. The author finds that there is less research done to analyze the financial performance and financial distress of European airlines, which are financially struggling over some time, therefore possible further research should be done on these financially struggling airline companies.

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APPENDICES

Appendix 1. Income statement of Norwegian Airlines in millions Nok (2015-2021)

Years / Particulars	2015	2016	2017	2018	2019	2020	2021
Revenue	**22483,5**	**25950,6**	**30948,3**	**40265,5**	**43521,9**	**8149,2**	**4853,3**
Other income	7,6	104	0	0	0	946,4	214,5
Total operating revenue	**22491,1**	**26054,5**	**30948,3**	**40265,5**	**43521,9**	**9095,6**	**5067,8**
Operational expenses	15839	18024,3	24021,6	32964	25386,8	5963,2	3846,4
Payroll	3433,7	3971,4	5316,3	6664,6	6817,5	2921,2	2084,9
Depreciation, amortization and impairment	1133,3	1295,8	1405,1	1667,6	6457,5	0	0
Other operating expenses	1263,2	1519,1	1983,7	1825,9	4849,9	1961,9	1390,2
Other losses/(gains) - net	474,2	-576,6	-432,2	994,1	-845,8	3004,7	-737,5
Total operating expenses	**22143,4**	**24234,1**	**32950,4**	**44116,2**	**42665,9**	**13851**	**6584**
Operating profit	**347,8**	**1820,4**	**-2002,1**	**-3850,6**	**856**	**-23768,4**	**-2786**
Interest income	74,2	43,6	-71,3	117,5	204,5	68,2	13,7
Interest expense	463,3	686	958,6	1159,5	3108,6	-2690,7	682,3
Other financial income(expense	13	117,5	-35,3	2273,9	374,1	4265,7	5330,5
Net financial items	**-376,2**	**-524,9**	**852**	**1232**	**2530**	**1643,2**	**6026,5**
Share of profit from associated companies	103,4	212,8	291,9	128,5	-13,6	0	0
Profit before tax	**75**	**1508,3**	**-2562,2**	**-2490,1**	**-1687,6**	**-22133**	**1876,5**
Income tax expense (income)	-171,1	373,4	-768,5	-1036	-78,5	906	5,5
Profit for the year	**246,2**	**1135**	**-1793,7**	**-1454,1**	**-1609,1**	**-23039,8**	**1870,5**

Source: Norwegian Airlines Annual report (2015 – 2021)

Appendix 2. Balance sheet of Norwegian Airlines in millions Nok (2015-2021)

Years / Particulars	2015	2016	2017	2018	2019	2020	2021
ASSETS							
Non-current assets							
Intangible assets	206,7	198	201,4	212,3	198,2	159,2	2070,6
Deferred tax asset	593,6	242	1 018,9	2 673,8	2 672,4	2074	0
Aircraft, parts &installations on leased aircraft	18507,7	22572	25 861,9	31 064,2	60970,4	591,9	6767,5
Equipment and fixtures	79,5	88	90,5	211,4	197,9	145,7	0
Buildings	285,7	283	279,5	269,4	263,7	252,4	0
Derivative financial instruments	0	115	31,0	3,5	0	211,5	0
Financial assets available for sale	82,7	83	2,7	0	0	3,7	0
Investment in associate	328,1	609	832,6	70,3	23,7	1328,1	123,1
Prepayment to aircraft manufacturers	5939,3	7156	5 219,4	8 561,3	4946,6	498,9	0
Other receivables	501,8	624	790,0	1 142,4	1461,4	405,3	0
Total non-current assets	**26525,1**	**31969**	**34 327,7**	**44208,6**	**70734,3**	**5670,7**	**8961,2**
Current assets							
Assets held for sale	0	0	0	850,6	1204,5	0	0
Inventory	104,1	103	101,9	167,3	175,7	63,3	16,3
Trade and other receivables	2550,7	3014	4 357,6	6 752,6	10132,9	4119,1	2152,9
Derivative financial instruments	0	353	615,7	32,6	0	0	0
Financial assets available for sale	0	0	80,0	0	0	0	0
Investment in financial assets	0	0	0,0	2051,8	0	0	0
Cash and cash equivalents	2454,2	2324	4 039,8	1921,7	3095,6	2443,2	7694,8
Total current assets	**5109**	**5793**	**9 194,9**	**11776,6**	**14608,7**	**6625,6**	**9864**
Total assets	**31634,1**	**37763**	**43522,6**	**55985,2**	**85343,0**	**12296,3**	**18825,2**

Source: Norwegian Airlines annual report (2015 – 2021)

Appendix 2. Continuation

Particulars \ Years	2015	2016	2017	2018	2019	2020	2021
Share capital	3,6	4	3,6	4,5	16,3	397,5	0
Share premium	1231,6	1232	1 231,6	2 686,7	6 664,1	18805,1	0
Other paid-in equity	94,4	111	127,8	132,9	149,2	942,3	0
Other reserves	876,2	773	641,4	1 011,7	1 085,5	1,2	0
Retained earnings	759,6	1919	81,7	-2 148,6	-3 814,0	-29483	0
Shareholders' equity	2965,3	4038	2 086,1	1 687,2	4 101,1	0	3269,6
Non-controlling interest	0	11	12,3	17,3	23,8	0	0
Total equity	**2965,3**	**4049**	**2098,4**	**1704,4**	**4124,9**	**-9336,4**	**3269,6**
Non-current liabilities							
Pension obligation	134,5	107	149,7	146,5	177,5	0	0
Provision for periodic maintenanc	1177,5	1377	2 679,4	3 187,5	3879	1077,9	0
Other long term liabilities	80,3	85	137,1	145,2	30080,9	425	1071,4
Deferred tax	0	0	0,0	614,5	540,7	0	0
Borrowings	16543,4	18706	0,0	22 530,0	22144,4	634,1	8541,4
Derivative financial instruments	0	28	22 060,3	38,1	369,2	3,2	0
Total non-current liabilities	**17935,8**	**20303**	**25026,5**	**26661,8**	**57191,7**	**2140,2**	**9612,8**
Current Liabilities							
Short term part of borrowings	3041,4	4769	4 244,5	11 309,1	8784,1	5688,9	836
Trade and other payables	2862,6	3882	5 568,3	8 011,8	9129,5	13354,5	3782,9
Air traffic settlement liabilities	4014,4	4666	6 493,6	6 907,3	6106,5	401,1	1324,2
Derivative financial instruments	782,5	86	41,8	1 359,4	0	49,2	0
Tax payable	32,1	8	49,6	31,4	6,1	-1,3	0
Total current liabilites	**10733**	**13411**	**16 397,8**	**27 619,0**	**24026,2**	**19492,4**	**5943,1**
Total liabilities	**28668,8**	**33714**	**41424,3**	**54280,8**	**81217,9**	**21632,6**	**15555,9**
Total equity and liabilities	**31634,1**	**37763**	**43522,7**	**55985,2**	**85342,8**	**12296,2**	**18825,5**

Source: Norwegian Airlines Annual report (2015- 2021)

Appendix 3. Income statement of Finnair in millions Euro(2015 – 2021)

Years / Particulars	2015	2016	2017	2018	2019	2020	2021
Revenue	2324	2316,8	2568,4	2834,6	3097,7	829,2	838,4
Other operating income	15,7	75,5	77	73,7	56,4	48,4	62,5
Total Operating Revenue	**2339,7**	**2392,3**	**2645,4**	**2908,3**	**3154,1**	**877,6**	**900,9**
Staff costs	-353,2	-362,5	-423,3	-433,4	-534,7	-283,5	-229,3
Fuel costs	-595,5	-491,5	-472,2	-581	-687,3	-232,7	-211,4
Other rents	-159,4	-167,4	-157,9	-154,9	-130,2	-89,3	-71,3
overhaul	-118,9	-147,3	-165,7	-169,1	-201,2	-104,7	-117,2
Traffic charges	-258,5	-262,8	-266,5	-300,8	-331,3	-112,4	-120,4
Ground handling & catering expenses	-250,3	-285,9	-252,2	-256,9	-476,7	-168,6	-148
Expenses for tour operations	-79,6	-87,8	-100,5	-113,4	0	0	0
Sales & marketing expenses	-74	-76,9	-85,8	-92,4	-172,1	-28,2	-38,1
Other expenses	-219,3	-266,6	-285,1	-330,9	-132,4	-109,7	0
Operational EBITDAR	**231,2**	**270,4**	**436,2**	**475,4**	**488,3**	**-251,5**	**-34,8**
Lease payments for aircraft	-99,3	-109,5	-136,6	-155	0	0	-99,7
Depreciation & impairment	-108,1	-105,8	129,2	-151,1	-325,4	-343,8	-319,8
Operational result	**23,7**	**55,2**	**170,4**	**169,4**	**162,8**	**-595,3**	**-454,4**
Fair value changes in derivatives & changes in exchange rates of fleet overhauls	-12,3	32	11,1	-4,5	12,6	130,7	0
Non-recurring items	110,2	29	43,3	42,6	-2,8	-14,9	0
Operating result	**121,7**	**116,2**	**224,8**	**207,5**	**160**	**-464,5**	**-454,4**
Financial income	1,3	1	-0,3	-2,9	4,8	38,7	12,8
Financial expenses	-9,7	-11,5	-13,4	-16	-83,6	-255,2	-117,8
Exchange rate gains & losses	0	0	0	0	12,7	26,6	-22,5
Share of results in associates	0,1	0	0	0	-0,9	0	0
Result before taxes	**113,3**	**105,8**	**221,1**	**188,6**	**93**	**-654,4**	**-581,9**
Income taxes	-23,6	-20,6	-41,7	-37,9	-18,4	131,1	117,6
Result of the financial year	**89,7**	**85,1**	**169,4**	**150,7**	**74,5**	**-523,3**	**-464,3**

Source: Finnair annual reports (2015- 2021)

Appendix 4. Balance sheet of Finnair in millions Euros(2015 – 2021)

Years / Particulars	2015	2016	2017	2018	2019	2020	2021
ASSETS							
Intangible assets	9,5	12,4	15,5	20,4	2269,7	2244,6	399,8
Tangible assets	811,6	1166,5	1422,1	1526,6	319,5	330,2	1974,4
Investments in associates & joint ventures	2,6	2,5	2,5	3,3	0	25,1	6,8
Loan and other receivables	8,7	7,4	5,6	4,3	0	0	0
Deferred tax assets	9,1	0	0	0	39,5	84,8	191,9
Non-current assets total	**841,5**	**1188,7**	**1445,7**	**1544,7**	**2682,7**	**2684,7**	**2569,9**
Inventories	11,8	14,9	17,2	25,1	80,2	68,1	55,89
Trade and other receivables	208,5	211,9	319,8	242,2	160,6	57,5	110,9
Derivative financial instrumer	155,8	176,6	104,5	52,1	55,7	12,4	26,1
Other financial assets	427,7	727,9	833	892,2	800,8	358,3	531,4
Cash and cash equivalents	280,5	69,4	150,2	180,9	151,9	465,3	734,3
Current assets total	**1084,3**	**1200,7**	**1424,6**	**1392,5**	**1249,2**	**961,6**	**1458,5**
Assets held for sale	124,5	139,3	16,7	0,1	0,1	0	18,7
Assets total	**2050,3**	**2528,7**	**2887,1**	**2947,3**	**3877,9**	**3646,3**	**4047,1**
EQUITY & LIABILITIES							
Share capital	75,4	75,4	75,4	75,4	75,4	75,4	75,4
Other equity	652	781,6	940,3	946,2	890,9	821,2	400,2
Equity total	**727,5**	**857**	**1015,7**	**1021,7**	**966,4**	**896,6**	**475,6**

Source: Finnair annual report (2015- 2021)

Appendix 4. Continuation

Years / Particulars	2015	2016	2017	2018	2019	2020	2021
Deferred tax liabilities	0	32,7	73,9	73,5	64,3	880,6	1204,1
Interest-bearing liabilities	271	617,3	586,2	561	477,3	1111	986,2
Pension obligations	4,4	31,9	6,4	17	77,1	1,5	0,7
Provisions	55,7	63,6	79	91,3	156,9	161,1	200,7
Other liabilities	15,8	4,9	1,1	4,8	913,6	0	0
Non-current liabilities total	**346,9**	**750,4**	**746,7**	**747,6**	**1689,2**	**2154,2**	**2391**
Current liabilities							
Provisions	38,3	22,2	21,1	21,2	17,2	20	13,8
Interest-bearing liabilities	75,2	100,4	132,4	180,4	43,5	51,5	441,7
Trade payables	67,5	94,4	90,7	72,6	84,7	24,8	53,5
Derivative financial instrumer	180,5	25,2	81,3	107,1	38,9	99,7	0,4
Deferred income & advances received	374,8	424,6	475,3	548,9	552,7	133,6	291,1
Liabilities related to employee benefits	91	93,4	139,2	105,6	119,4	70,7	74,4
Other liabilities	148,7	161,1	173,4	214,2	225,7	59,8	128,1
Lease Liabilities	0	0	0	0	140,4	135,6	176,9
Liabilities related to assets held for sale	0	0	11,2	0	0	0	0
Current liabilities total	**976**	**921,3**	**1113,4**	**1222,5**	**1222,5**	**595,7**	**1179,9**
Liabilities total	**1322,9**	**1671,7**	**1871,4**	**2911,7**	**2911,7**	**2749,9**	**3570,9**
Equity and liabilities total	**2050,3**	**2528,7**	**2887,1**	**3878,1**	**3878,1**	**3646,5**	**4046,5**

Source: Finnair annual report (2015 – 2021)

Appendix 5. Financial ratios of Finnair and Norwegian Airlines (2015-2021)

Ratios	Years / Airlines	2015	2016	2017	2018	2019	2020	2021
Current Ratio	Finnair	1,11	1,30	1,28	1,18	1,02	1,61	1,24
	Norwegian	0,48	0,43	0,56	0,43	0,61	0,34	1,66
Quick Ratio	Finnair	1,10	1,29	1,26	1,16	0,96	1,50	1,19
	Norwegian	0,47	0,42	0,55	0,42	0,60	0,34	1,66
Asset Turnover Ratio	Finnair	1,14	0,95	0,92	0,99	0,81	0,24	0,22
	Norwegian	0,71	0,69	0,71	0,72	0,51	0,74	0,27
Days Sales Outstandings	Finnair	33,88	33,46	44,90	30,94	18,59	23,91	44,93
	Norwegian	41,39	50,96	60,71	71,57	97,24	181,56	155,06
Debt to Equity	Finnair	0,48	0,84	0,71	0,66	0,54	1,30	3,00
	Norwegian	6,60	5,80	2,02	19,85	7,50	-0,68	2,87
Return on Assets	Finnair	4,37%	3,37%	5,87%	5,11%	1,92%	-14,35%	-11,47%
	Norwegian	0,78%	3,01%	-4,12%	-2,60%	-1,89%	-187,37%	9,94%
Return on Equity	Finnair	12,33%	9,93%	16,68%	14,75%	7,71%	-58,36%	-97,62%
	Norwegian	8,30%	28,03%	-85,48%	-85,31%	-39,01%	0,00%	57,21%
Net Profit Margin	Finnair	3,83%	3,56%	6,40%	5,18%	2,36%	-59,63%	-51,54%
	Norwegian	1,09%	4,36%	-5,80%	-3,61%	-3,70%	-253,31%	36,91%
Revenue Passenger Kilometers	Finnair	25,59	27,06	30,75	34,66	38,53	8,15	5,17
	Norwegian	42,28	50,79	63,32	85,12	86,61	13,68	6,86
Available Seat Kilometers	Finnair	31,83	33,91	36,92	42,38	47,18	12,93	12,09
	Norwegian	49,03	58,00	72,34	99,22	100,03	18,16	9,43
Load Factor(%)	Finnair	80,40	79,80	83,29	81,78	81,67	63,03	42,76
	Norwegian	86,24	87,57	87,53	85,79	86,58	75,33	72,75

Source: Author's calculation based on appendix 1,2,3 and 4

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