



**Performance evaluation based on
financial ratios
Case: Finnair and Scandinavian
airlines**

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<p>Abstract:</p> <p>This research aims to analyze air travel performance of Finnair and Scandinavian Airlines (SAS) based on financial ratios since aviation industry is developing worldwide and attracting a lot of attention and competition. Fundamentally, the airline industry has a strong relationship with other kinds of business and economic factors; therefore, small changes in these businesses might lead to a dramatic effect on the airline companies. This research aims to understand each airline's business behavior under many influencers by evaluating its financial performance with each other. A comprehensive investigation into profitability, debt coverage and market value ratios will help stakeholders have an exact evaluation and broader point of view about two rival airlines in the Nordic region. There are some limitations about technical operations that will not be explained in this thesis. Two analyses are conducted based on financial data extracted from financial statements of Finnair and SAS and other relevant sources. Besides, there are mathematical calculations to support the ratio analysis. All financial ratio interpretations of the two companies are shown in each ratio analysis which gives the most correct reflection of the companies' performances. Finally, measurement of the overall analyses presents better result of profitability, operational efficiency and decision-making process to identify the better airline.</p>	
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ABBREVIATIONS

Financial terms

ROA	Return on assets
ROE	Return on equity
ROCE	Return on capital employed
EPS	Earnings per share
P/E	Price earnings ratio
D/E	Debt to equity
ROIC	Return on capital
WACC	Weighted average cost of capital
P/S	Price/Sales

Aviation terms

IATA	International Air Transport Association
SAS	Scandinavian Airlines
FSNC	Full service network carriers
LCC	Low cost carriers
RPK	Revenue passenger kilometers
ATK	Available ton-kilometer

1 INTRODUCTION

1.1 Background

Long-term sustainability, growth, and development based on a solid platform of a company requires good decisions and outstanding performance. These requirements significantly depend on holistic evaluation within the company. Fundamentally, critical evaluation of a firm or business might come from management teams, consultants, or investors as stakeholders. Moreover, in order to sustain long-term prosperity, companies must base their business on credible and accurate data which can be obtained from financial analysis. Regular review of company's financial health status is a valuable practice (see Hsieh & Wang 2001). It is evidence that in certain situations management makes bad strategic choices and decisions which lead to poor performance due to lack of profound knowledge or information in the decision-making process.

Financial ratios are basic tools used to analyze financial situations and performance of firms or companies. Additionally, financial ratios are numerical values and they are retrieved from company's financial statements (cf Mahipal Singh 2011 pp. 351). Analysis based on financial ratios is the most important method to evaluate company performance from different aspects of business. Financial ratios are defined as relationships determined from a company's financial information and used for comparison purposes (Saleem & Rehman 2011). They are considered as the optimal tools for analysis to reflect the financial conditions and performance of the company during certain period. Moreover, they also help to identify strengths and weaknesses (David Ingram 2009). Additionally, these ratios help to form a solid foundation for financial analysis by properly establishing relationships between items in the balance sheet and profit and loss account within the firm (see Innocent *et al.* 2013). Financial ratios can vary from one industry to another industry, and differences apparently depend on their business characteristics. These ratios are well-analyzed if they are compared to industry peers.

The airline industry has been one of the most important sectors for economic development, and it actually has a great impact on the whole economy. This industry involves its operations and other industries such as aircraft manufacturing and tourism

(see MIT no date). Not only does it stimulate economic growth, potential investment, tourism and other related industry, but it also contributes to globalization. The fast growth in globalization motivates people who are mainly business and leisure travelers using air travel. This industry has grown approximately 5% per year over the past 30 years based on a statistic, and this number is forecasted to continue to increase. In 2015, the airlines industry keeps growing but in a consistent trend and according to International Air Transport Association (IATA), the industry's revenue has been doubled from USD 369 billion in 2004 to USD 746 billion in 2014 (E. Clayton & A. Hilz, 2015). Fundamentally, the airline industry is considered to be sensitive to economic changes, financial and business conditions and involved large operational expenses. Moreover, revenue from a certain airline company is dramatically influenced by the introduction of many low-cost carriers which might lead to fierce competitions, oil price reduction more than 70% since June 2014 according to Clifford Krauss (2016), infectious diseases, volcanic eruptions, terrorist attack in September 11 2001. Consequently, all of these events result in remarkable effects, regarding the financial perspectives, on almost airline companies' performance and sustainability. Based on those statistics and analysis, key roles of financial ratio analysis might be well reflected through analysis of some cases in the airline industry.

Currently, many airlines are trying to create travel experience in order to attract all types of customers with the most positive attitude and satisfaction from them. That leads to the competition or collaboration among a lot of airlines all over the world. The liberalization and deregulation facilitate the movement of the airline industry such as new market entry, alliance or a joint venture and networking.

This research will provide a financial comparison from the 2004-2014 period between Finnair and Scandinavian Airlines (SAS). The reason why these two Scandinavian region-originating carriers were chosen to be analyzed was based on their strong competition to Asian market-expansion. Based on the geographic advantages of Helsinki hub offer, Finnair can shorten the time traveling as compared with SAS. Nevertheless, being well-known for all sorts of records and unique operations, SAS's the Asian network is out of Copenhagen and new route opened between Stockholm-Hong Kong is a promised strategy to limit Finnair's access to Swedish air traffic (CAPA 2015). One similarity of two industry peers is the expansion into Asian market

for the long-haul fleets, that also includes opening all-new route. SAS intended to operate seven a week long-haul flights from Copenhagen to Shanghai and according to SAS's CEO, these new departures together with their upgraded long-haul fleet will strengthen SAS position in near future. On the other hand, Finnair will open two new direct Asian destinations which consist of Fukuoka in Japan and Guangzhou in China, which raised the number of Finnair's Asian destination into 17 cities (Finnair 2015). The Asian market is probably considered as the fast-growing passenger demand for air travel which attracts a lot of investment and network expansion in the airline industry. However, in 2014, both airline companies suffered big losses in net and operational level. Finnair's decline in revenue was due to a decrease in unit revenue in passenger, cargo traffic, sales of package tour operator and some aviation services. On the other hand, SAS was facing a highly competitive market place of capacity growth and price pressure from its competitors even though it achieved its cost reduction targets.

The aim of this study is to use financial ratios analysis to evaluate a ten-year period of the two airlines companies' performance. An insight will be shared on related factors which significantly impact on the airline industry in general.

1.2 Research purpose and questions

The purpose of this research is to evaluate performance of two airline companies which are Finnair and SAS based on their financial conditions through financial ratios and annual report. The comparison is about their performance from 2004-2014 between intercontinental long-haul fleets development and short-haul fleets focus within Nordic region. The aim is to understand how well these airlines industry peers performed in 2014, how profitable and stable they were in previous year between two different airlines with different focus and strategy, and help stakeholders such as investors and customers have an objective evaluation on choosing two companies to consider and invest.

The research question involved in this study is: How profitable is Finnair as compared to SAS based on annual report analysis and financial ratios?

Other aspects such as stock price and market value are taken into consideration as well.

The sub-research questions are subject to be answered through the study:

- How was Finnair's performance from 2004 to 2014 as compared to SAS?
- Based on profitability ratios, which company did a better performance on minimizing the costs and expenses to gain more profit?
- Based on debt coverage ratios, which company has more assets to pay off its liabilities?
- Based on market ratios, which company has a higher value from investor's perspectives?

1.3 Significance

This research concentrates on financial ratio analysis which is used to describe a significant relationship between figures shown on a balance sheet, in a profit and loss account, in a budgetary control system or in any other part of the accounting organization (Batty J 2010 pp. 228). From a management perspective, managers can base on financial ratios to have the right choice in the decision-making process and efficiently adopt new policies and new management system. Moreover, investors can predict the future situation, earning capacity of their invested companies and how safe their investments are. Ratio analysis also let other creditors know the ability of a company to pay off its debt and that company's potential in the future in order to keep lending it. The significance of financial ratios to the government can be found in industry's ratio. Many financial ratio analyzes from different companies in the same industry help the government have an exact evaluation and decide what financial support they should do in order to help those companies (BB&T 2011). As mentioned, the airlines industry is directly influenced by other related industries such as manufacturing, transportation, fuel costs, oil price, labor costs and vice versa (see MIT no date). Analyzing financial performance based on financial ratios of two Nordic airlines helps managers from both companies get a deep understanding what situation their companies are, as compared to their competitor, in order to strengthen it in the upcoming year and give investors right investment decisions.

1.4 Limitations

This research will concentrate on the performance of two airline companies in Nordic region in 2014 which are Finnair and SAS. Fundamentally, within the airline industry, the major concern of almost companies is operation handling. There are so many factors around an airline company that should be considered. These factors consist of operations with traveling, ground handling, political problems, aircraft manufacturing and purchase, tourism, merger, and acquisition. However, this research will go into a deep analysis based on financial ratios since these factors are considered to be significant to decide the survival factor of an airline company. In order to evaluate performance properly between two airlines, deeper insights into the company's operations and financial ratios are required. Nonetheless, this research attempts to analyze financial aspects of companies' performance based on financial ratios, some facts regarding operations of an airline company are limited. Additionally, this research will not go deeper in analyzing two companies' potentials in expanding their presence in the Asian market and their competition in this field.

1.5 Method

The main material for this study is data and online information retrieved from Finnair and SAS's annual report and their websites. This study will present an overview of financial situations in a ten-year period of both airline companies. Data from Finnair Annual report from 2004 to 2014 period is retrieved as a foundation for further analysis. With regards to SAS airline, the SAS Annual Report 2004-2013/ 2014 which was released in January 2015 will be used.

This research is based on data analysis, as such quantitative method is used. There are four main aspects that have to be proven to be potential reference in providing ratios from an annual report, and these are income statement, balance sheet, cash flow statement and statement of shareholder's equity. To be more specific, profitability, debt, and market ratios are calculated based on financial statements in each annual report to measure the performance of Finnair and SAS. Furthermore, calculations relating to mathematics, different ratio analysis, and statistical figures from the companies are

taken into consideration to aid in identifying which airline performed better than the other. Relevant information from articles, journal books, and recent issues involved in the airline industry will be looked at to find the answers to research questions. This research is based on the exploratory research which interprets great available information from the airline industry and particularly emphasizes on analysis and interpretation of secondary data source.

A ratio itself cannot well indicate the current situation of a firm or company, it has to be compared with other standards. Cross-sectional analysis is conducted in this research in order to compare financial ratios in one company with another selected firm in the same industry at the same point in time in order to have an appropriate reflection of a company situation based on the trend in the ratios from year to year. Comparison to industry average is popular, but the firm is likely to be viewed favorably if it has better value than the industry average. Thus, it is crucial to investigate deviations to either side of industry standard. (see Reddy, C.V 2013). Analysis of the financial performance for these airline companies will give an insight into how profitable Finnair and SAS are and which airline is better as compared to the other during the ten-year period.

Next stage is to filter all the financial figures needed from financial statements within the two annual reports to analyze ratios. In profitability ratios, net profit margin, return on assets (ROA), return on equity (ROE), and return on capital employed (ROCE) will be analyzed to measure how profitable both airlines are.

Subsequently, debt coverage ratio or leverage ratios consists of debt to equity ratio to know company's abilities to sustain operations by comparing total debt with net operating income.

Market value ratios with earnings per share ratio and price-earnings ratio to compare market value, stock price with book values from financial statements.

After analyzing all ratios, mathematical ratio calculation is used to get the result, and the results will be graphically presented in order to find the trends in the ratios from year to year.

Data will be interpreted based on what has been analyzed among many ratios between the two companies. With the tool analysis of financial ratios and graphical chart, comparative analysis between Finnair and SAS is made to decide which company has better performance in 2014. This analysis can be based on the time-series analysis which evaluates performance over time. Furthermore, with the market value and stock price of the two companies on stock market, there will be more insights provided to have a correct evaluation of two rival companies.

1.6 Structure

This research consists of seven chapters including an introduction, literature review, an airline industry overview, organization profiles, analysis of financial ratios, discussion, conclusion and summary.

The introduction is designed to provide the general structure of the dissertation such as background, aim of the research, the significance of this study, brief limitations and how the data will be analyzed.

The next chapter presents relevant background information to form an academic base for what is stated about financial ratios.

The third part presents an overview of the airline industry, factors that have been dramatically effected on this industry in order to provide an adequate insight for readers.

The third chapter provides more information about two airlines to present more information from both companies and their current situations.

The following chapter is about data processing, calculations based on the ratio, graphical analysis and comparison between the two companies. Data interpretation and result are also presented in this chapter.

The next chapter presents the discussion of the results and whole study about financial ratio analyzes of the two companies, and the airline industry characteristics. Moreover, there will be some findings based on interpretation of those results.

The last chapter includes a summary of what has been presented in the thesis and a conclusion where to find the better performance of the two airlines.

2 LITERATURE REVIEW

Financial ratios are numerical values, and they are retrieved from company's financial statements. Analysis based on financial ratios is the most important method to evaluate company performance from different aspects of business. Financial ratios are defined as relationships determined from a company's financial information and used for comparison purposes (Saleem & Rehman 2011). They are considered as the optimal tools to reflect the financial conditions and performance of a company under certain period. Moreover, they also help to identify strengths and weaknesses and form a solid foundation for financial analysis by properly establishing relationships between items in the balance sheet and profit and loss account with the firm (David Ingram, 2009). However, it is argued that financial ratios are most effectively used when compared to a standard or a norm that means a single ratio itself can not indicate favorable or unfavorable conditions. It has to be compared with a benchmark or other standards before commenting on the ratio itself. (see Innocent *et al.* 2013). There are different ratio categories among the financial ratios which reflect various aspects of a company's performance: profitability ratios including net profit margin, ROA, ROE, ROCE; debt coverage ratios or leverage ratios including D/E and market value ratios including EPS and P/E.

Table 1. Categorized financial ratios

Category	Financial ratios
1. Profitability ratios	Net profit margin
	Return on assets (ROA)
	Return on equity (ROE)
	Return on capital employed (ROCE)

2. Debt coverage ratios	Debt to equity ratio (D/E)
3. Market ratios	Earning per share (EPS)
	Price-earnings ratio (P/E)

2.1 Profitability ratios

Profitability ratios are the ratios receiving most concern in a company. It measures the ability to generate profits or how well company gains profits. Moreover, profitability ratios are one of the most important factors to evaluate business from investor's perspective since they show overall efficiency and performance of company. If a company wants to attract investors, these ratios are the first things those stakeholders tend to look at obviously. According to Bernstein (1983), there are several criteria to measure financial performance of a company, and profit and sales are two of the most widely used measures. There are four indicators in profitability ratios which are net profit margin, return on assets (ROA), return on equity (ROE) and return on capital employed (ROCE). In a different business cycle of a company, there is a strong statistical relationship between operating profit margin, net profit margin, ROE ratios (Almazari, Ahmad A.K 2009 pp. 75-89). (see Reddy, C.V 2013).

There was a research concentrating on the problem that whether firms return on profitability after a financial crisis. A short term before and after the crisis as well as the longer term post-crisis period was taken into consideration to know how fast a company could recover from financial crisis. Profitability ratios consisting of net profit margin, return on assets were useful in examining the changes in profitability of the firm since those ratios showed the net change in profitability at both operating profit level and net income level. Initially, two hypotheses were questioned to know whether the profitability of companies had the same means or medians as it was in the pre-crisis period. Subsequently, these hypotheses were tested based on a time-series analysis of those profitability ratios. As a result, the financial crisis led to a big drop in almost companies' profits; however, the level to which how they were damaged depended on different countries and how they adapted to regain more profits. (Prasad, et al. 2015). This finding can be useful for the airline industry analysis since there was the global crisis in 2008 and every company had to suffer negative earnings during that time. The

result from the mentioned study proved that such a capital-intensive business like the aviation industry was dramatically influenced from the financial crisis. However, the difference among each company was how well they managed to adapt to the crisis and tried to increase their revenue in the next subsequent years.

2.1.1 Net profit margin

Net profit margin is calculated as the ratio between net profit and net sale. In another word, this ratio shows how much each dollar earned by a company can be converted into profit which excludes all expenses. It is also the measure how profitable a company is after deducting all expenses, taxes, interest and preferred stock dividends (Reddy, C.V 2013). According to a research, the role of profit margin is considered to be important not only about the amount of profit that the owners can extract from the business, but also about a line of defense for an advisory firm facing a decline in revenue when a bear market occurs (see Kitces, et al. 2015).

2.1.2 Return on assets

ROA is considered to be one of five factors to predict business failure using a version defined as Earnings Before Interest and Taxes / Total Assets (Airman E.I 1968). According to Hossari & Rahman (2005), the ROA is the single most common ratio in all the failure prediction studies based on their study including 53 previous studies. ROA is also a useful tool to investigate financial position, performance and company's future predictions. Besides, assets are well utilized to generate income which is indicated through high percentage of ROA. The important of ROA in assessing company's financial position, performance and future prospects was shown through a survey by Gibson (1987). Chartered Financial Analysts was surveyed about the importance of many financial ratios and four different versions of ROA were selected by at least 90% of the CFA respondents as a primary measure of profitability. Based on an investigation conducted by Jewell, J. J & Mankin, J. A (2011), ROA should not be thought as a single ratio but a "category of ratios". This category of ratios consists of almost ratios which make a comparison between earnings related number from the income statement to total assets or average total assets. The ROA can be determined by velocity which is sales divided by assets. According to Rothschild, M (2006), he found

out that ROA can be calculated as the product between margin and velocity. Moreover, ROA can be yielded by low-margin and high-margin products of those low-margin products are easier to make and flow through the assets at higher velocities.

2.1.3 Return on equity

ROE shows how well a company can generate returns from shareholder's investment. Apparently, shareholder's equity consists of retained earnings, common stock, paid-in capital common stock and it does not include preferred stock. This ratio is calculated as net profit divided by shareholder's equity or multiplies profit margin by asset turnover by equity multiplier (Andrew T.G 2003). The ratio itself reflects three major dimensions of business from stakeholders' perspectives: income statement, profit generated from one dollar invested, how well assets can generate sales and amount of solvency risks (Eisemann, P.C 1997). A low ROE indicates that the firm does not generate much retained earnings which might lead to funding problems and excessive solvency risk. Moreover, a low return on shareholder equity means that the company is seriously in a bad situation and this can limit external equity. It is stated that character of an industry is not the only force affecting ROE of a business. This ratio depends on customer niche, product strategy, and financial choices as well. Therefore, in the same industry, each business will exhibit some variety of behavior. A low ROE indicates that either the firm as a significant weakness or this can lead to funding problems and excessive solvency risk. A low ratio can discourage the capital invested or external equity. (see Eisemann, P.C. 1997). Fundamentally, the higher the ROE ratio, the faster total shareholder equity and stock price will grow as profits in each year are added to the stockpile of shareholder wealth. However, a study conducted by Rothschild, M (2006) shows that the ROE itself is too abstract and removed from day-to-day business operations to be of any practical use in measuring and managing profitability. This ratio needs to be separated into its components.

2.1.4 Return on capital employed

ROCE has the advantage of being free from the bias that can result from differences in capital structure between firms (Balabanis, *et al.* 1988 pp. 25-44). ROCE is calculated by dividing net operating profit or earnings before interest and tax by the employed

capital. The higher the ratio means much profit is generated from each dollar of capital employed. However, it is stated that ROCE can damage company's health in long term according to an article in Management Today (1996). ROCE is considered to take profits rather than cash flow as the basis for calculating return since as equipment is written down, the depreciation charge falls and profits rise even though the cash generated may remain unchanged or even fall.

2.2 Debt coverage ratios

Debt coverage ratios or leverage ratios are regarded as the appropriate instruments, to safeguard the system of financial regulation and supervision against failure in risk assessment (The BCBS 2009). Additionally, debt coverage ratio is a measurement of cash flow available to pay current obligations in a company. Substantially, these ratios provide financial supervisors a simply and transparent oversight instrument which enables them to judge a critical situation, reach quick decisions and take a firm line with the supervised banks (Kellermann & Schlag 2013).

There is a concern for the investors about whether to choose the book value or the market value when they look at the risk through financial ratios according to Pamela Peterson (2015). The book value of equity consists of all the company's earnings less the dividends and the proceeds to the company of all the stock issued less any treasury stock. When using the book value to calculate the book value of equity of a company, the result understates company's market value by a large amount compared to using the market value to calculate equity value. There are some reasons that make the result for book value be less than the market value: the earnings are recorded according to accounting principles which does not well reflect the economic situation, and because of inflation, the current value of money does not well reflect. Therefore, when using the value for denominator in total shareholder's equity for calculating the D/E ratio, the market value of equity is more preferable. (see Pamela Peterson 2015).

2.2.1 Debt to equity ratio

This ratio which is also known as the D/E ratio is a leverage or measure of risk. D/E ratio reflects the company's ability to raise fund and repay it. According to Lewis (1993

pp.13), the greater an entity's D/E ratio, the greater the use of other people's money to make money. Additionally, the greater an entity's D/E ratio is, the greater the opportunity is for high returns to that entity. A ratio of more than 1:1: could be understood that debt is higher than equity and the business itself is negatively geared. Moreover, the external lenders both have more risk and have a stronger financial interest in business compared to the owner (Government of Western Australia no date). It is calculated as the rate between total liabilities and shareholder's equity. In another way, for every dollar a company has for equity, D/E ratio shows how much debt or liability the company has. As mentioned, this ratio is a measure of risk since the more debt that is used, the greater the risk that the firm might be forced to liquidate and go out of business (Lewis 1993 pp.13). In a study to value the debt and equity of a corporation, this ratio is proved to show how the capital budgeting decisions of a levered firm is affected, which leads to a highlight of the roots of the conflicts of interests between equity holders and bond holders (Camiolo, et al. 2009).

2.3 Market value ratios

Market value ratios are defined as the ratios that relate the market price of the firm's common stock to selected financial statement items. There is a study showing the relationships between various financial indicators and stock returns in NYSE and AMEX stock exchanges. It is stated that the stocks of companies having a low book value market value ratio, P/E ratio and cash flow to price ratio provide lower return and perform worse than the stocks of companies having higher book value of those. (Lakonishok, J, et al. 1994). Moreover, according to a study focusing on analyzing relationship between company size and book value to market value ratios, the factors of company size and book value to market value ratio are associated with profitability and the stock returns (Fama & French 1995).

A study was conducted to test the relevance of financial ratios for stock prices' dynamics. Initially, the hypothesis was whether the financial ratios well reflected the companies' financial health in the selection of portfolios' structure in long term period. According to Amir et al (1993), a ratio is value relevant if it has a significantly strong predicted association with stock prices and stock market indicators such as P/E or price to book ratios. The data was gathered in the first quarter of 2003 and 2011 for 254

companies traded on FTSE 100, CAC 40, DAX, OMS Finland markets and 241 companies traded on S&P500 market. After choosing the data, an analysis was conducted based on the orthogonal deviations methods to express observations as the deviation from the average of future observations in the sample for the same individual, and to weight each deviation to standardize the variance. The result showed that there was a great relevance of financial ratios for the European capital markets compared to the United States; in another meaning, it was found that changes in the level of financial ratios significantly generated stock prices changes in European market. Moreover, it was stated the diluted EPS indicator was positively associated with the increase in prices of stock. (Dima, et al. 2013)

2.3.1 Earnings per share ratio

Earnings per share ratio (EPS) is calculated as net income divided by a weighted average of common shares outstanding for the year (Consler, *et al.* 2011). EPS ratio measures the amount of net income paid to holders of common stock. There are some contradictory opinions about the EPS and P/E ratios. Higher EPS means a lower P/E ratio and investors tend to observe the P/E ratio closely to determine if a company is undervalued. Higher EPS also means more money the shares of stock are worth since investors are willing to pay more for achieving higher profits (Nasdaq no date). By lowering the P/E ratio of many companies, the basic EPS will make the market appear undervalued to investors, and it helps to attract more money and increase the stock price. However, according to Financial Accounting Standards Boards chairman, there is no pure correlation between changes in EPS and price per share on the market (Mello, J, P 1996). On the other hand, a valuation model was developed by Balsam, S & Lipka R (1998) stated that the relationship between stock prices and accounting earnings had been studied. According to the model, there was an assumption that earnings effectively signal future cash flows and that shares prices are determined under rational expectations (Litzenberger & Rao 1971). Therefore, earnings can explain the prices.

2.3.2 Price earning ratio

Another ratio reflecting market value ratio is price earnings ratio (P/E). The P/E ratio is widely used as a measure of relative stock valuation. Moreover, this ratio is an indicator

to determine whether stocks are under or overvaluation (Dudney, *et al.* 2015). In another word, the P/E shows what market is willing to pay for stock based on its current earnings (Ashish Gupta 2010). It is calculated as the ratio between market value price per share and earnings per share. According to mispricing view, it is stated that low P/E ratios generate a higher return than stocks with high P/E ratios. However, there are some arguments about how P/E is calculated and it significantly determines a company's value. There are various ways to choose which earnings should go to P/E formula such as earnings from the previous year, or net estimated earnings, or last quarter's earnings multiplied by four. Most companies are using the traditional method, and according to Kari Bayer, a quantitative strategist at Merrill Lynch & Co. in New York "We just found that trailing four-quarter earnings is more reliable" (see M. K. Pratt 2001). It is believed that taking P/E ratio based on historical earnings will form a safer position for company; however, predicted earnings for the future should be made in case there is no earnings in the following period. Therefore, for new companies, the price-earnings ratio is not well-calculated.

There is a study examining the relationship between P/E ratio and profitability which was conducted by Alexandra Wu (2014). He used a U-shaped graph to show whether firms with very high or very low ROE ratio had higher forward P/E ratio compared to other firms. In the test, the ROE was sorted into ten deciles to test the differences in P/E ratio across the deciles. Among deciles 1 and 6, the relation between forward P/E and ROE was negative; on the other hand, it became positive among deciles 7 to 10.

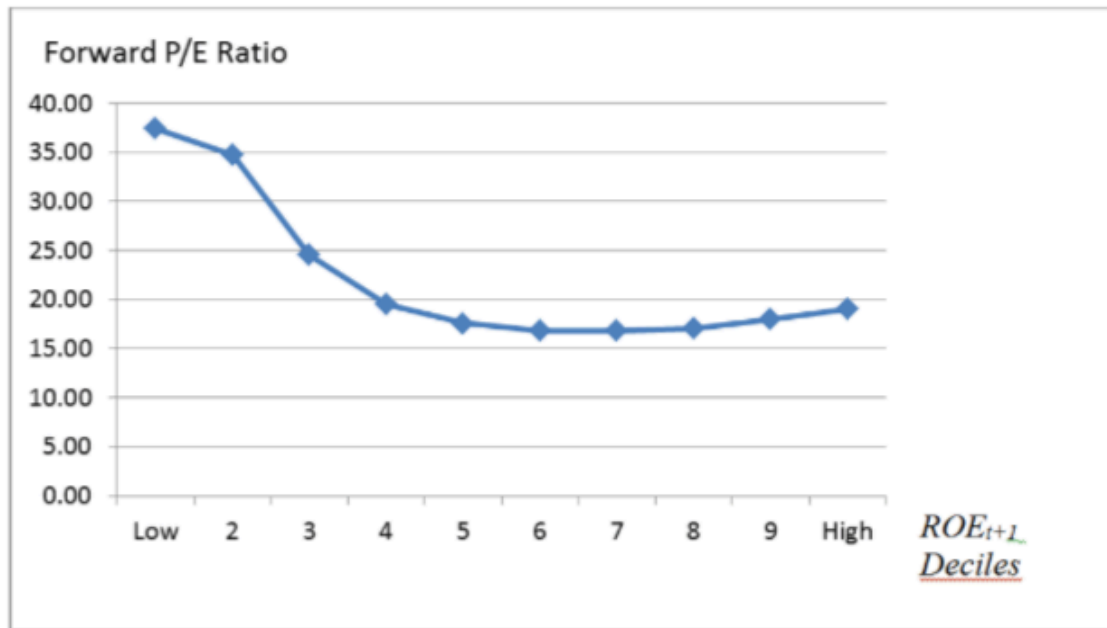


Figure 1. Relation between the forward P/E ratio and ROE (Source: Alexandra Wu 2014)

The result from the test showed that P/E ratio had a U-shaped relation with ROE which meant that companies with higher forward P/E ratio achieved lower ROE in the subsequent years. Moreover, the distribution of those companies' ROE was more volatile and wide-spread than companies with lower P/E ratios. The wide distribution of ROE in the high P/E companies could be considered to be risky to invest in such companies because their ROE in some subsequent years could be very high or very low.

3 AIRLINE INDUSTRY OVERVIEW

3.1 Economic performance

Through past 20 years, the airline industry in Europe faced a lot of changes: involving from regulated markets with many national flag carriers to free market the airline industry like today. People have seen a lot of tremendous changes in this industry which were acquisitions and mergers, take-overs, different business models and joint alliance.

Currently, there are a lot of business models that each airline company is pursuing which are full-service network carriers (FSNCs), low-cost carriers (LCCs), holiday carriers, regional carriers, traditional freight carriers, hybrid carriers (Air Transport and

Airport Research 2008). Moreover, many airlines have joined alliances which adopted agreement and code shares, equity transfer. The advantage of airline alliance can be obviously seen through operational cost savings, frequent flyer reward to reach the mileage rewards, increase traffic per seat mile, brand improvement.

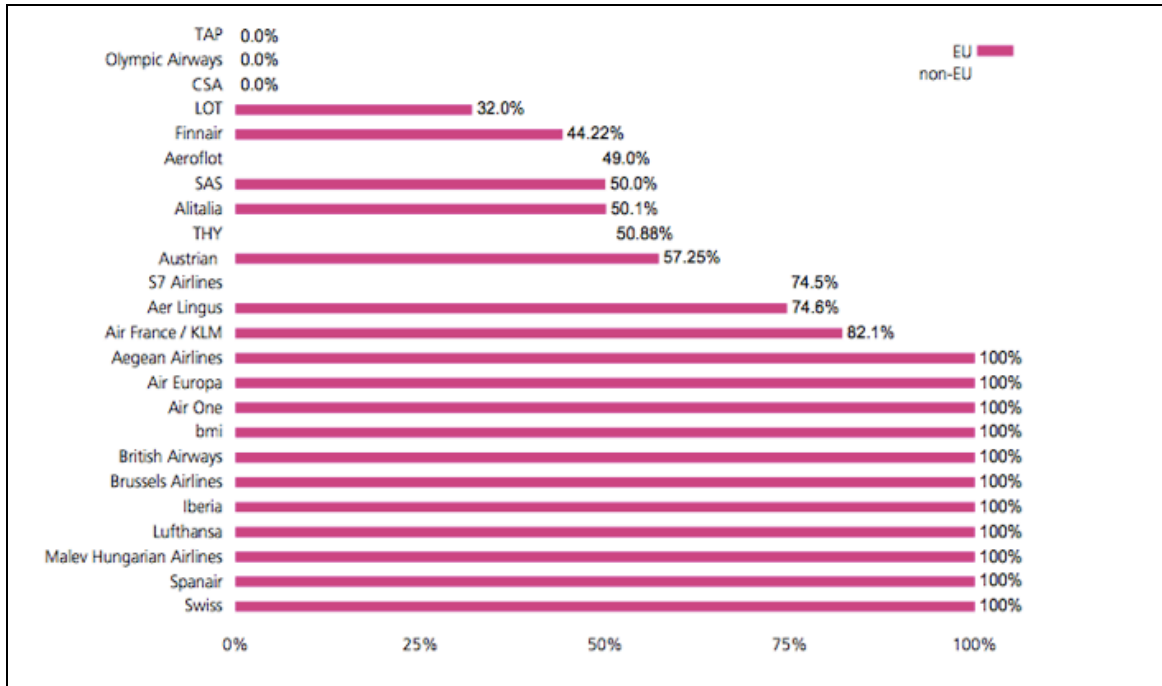


Figure 2. Top 25 full-service network carriers (FSCNs) regarding seats per week in Europe – Degrees of Privatization (2008) (Source: Ascend Database, Airline Websites, Airline Annual Accounts)

The below percentage graph shows global air passenger distribution by region and predicted percentage in 2014 (Air Transport and Airport Research 2008). In 2014, Asian Pacific passenger market accounted for the largest percentage which was 35% of total global air passenger. The second position was European and third position was North American market for approximately 27% and 23%, respectively. A number of air passengers from Middle East, South Africa and Africa did not make up a large percentage as compared two those regions mentioned above. This trend is predictable to happen the same in following 20-year period with the same air travel passenger for Europe and North America market.

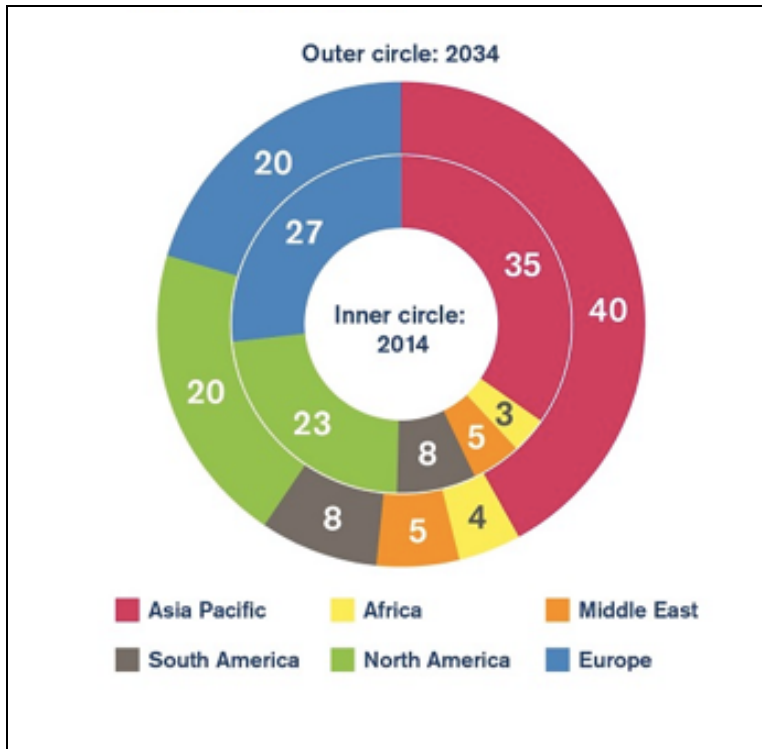


Figure 3. Global air passengers by region (%)

Air traffic passenger demand from 2005 to 2015 tended to rise during this period except a dramatic drop in 2008 and 2009 due to the global crisis. This crisis literally made the air passenger demand decrease by 7.3% as compared 2007 and this number continued to decrease to -1.4% in 2009. (Statista 2016).

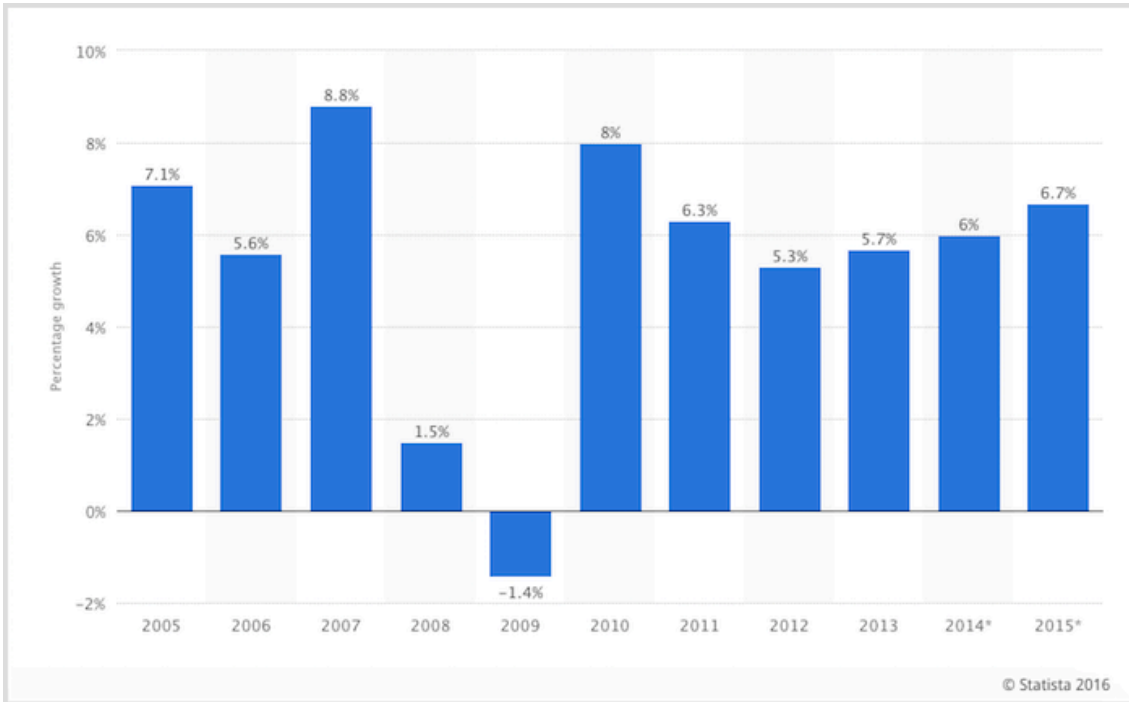


Figure 4. Growth in air traffic passenger demand worldwide annually (2005-2015) (Source: Statista 2016)

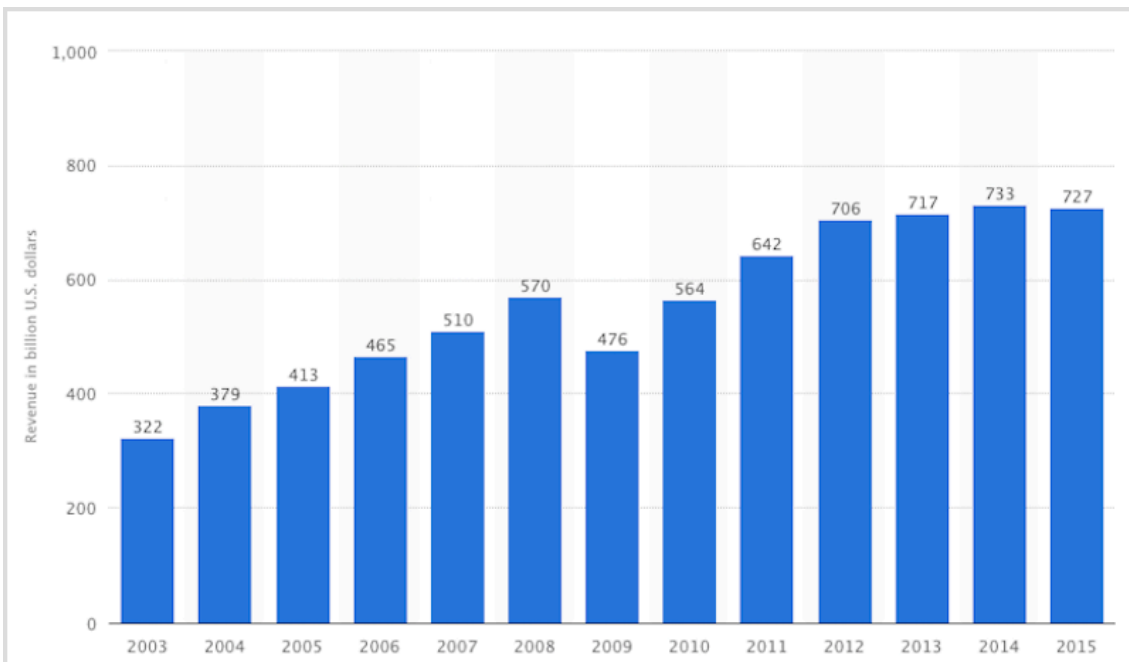


Figure 5. Revenue of commercial airlines worldwide in billion US Dollars (2003-2015) (Source: Statista 2016)

From financial perspectives, the airline industry overall practically has been growing rapidly with doubled revenue since 2003. Revenue in the twelve-year period has the growing trend from year to year except a drop in 2009. In 2009, there was 6% drop in

passenger volume and 13% plunge in average price in one-mile fly due to the global recession, high levels of employment and high fuel costs. After this low revenue period, revenue kept growing to USD 727 billion in 2015 (B. Rooney 2010).

An economic value of an airline company is fundamentally measured by the value of international trade carried and revenue earned from passengers through air travel (IATA 2015).

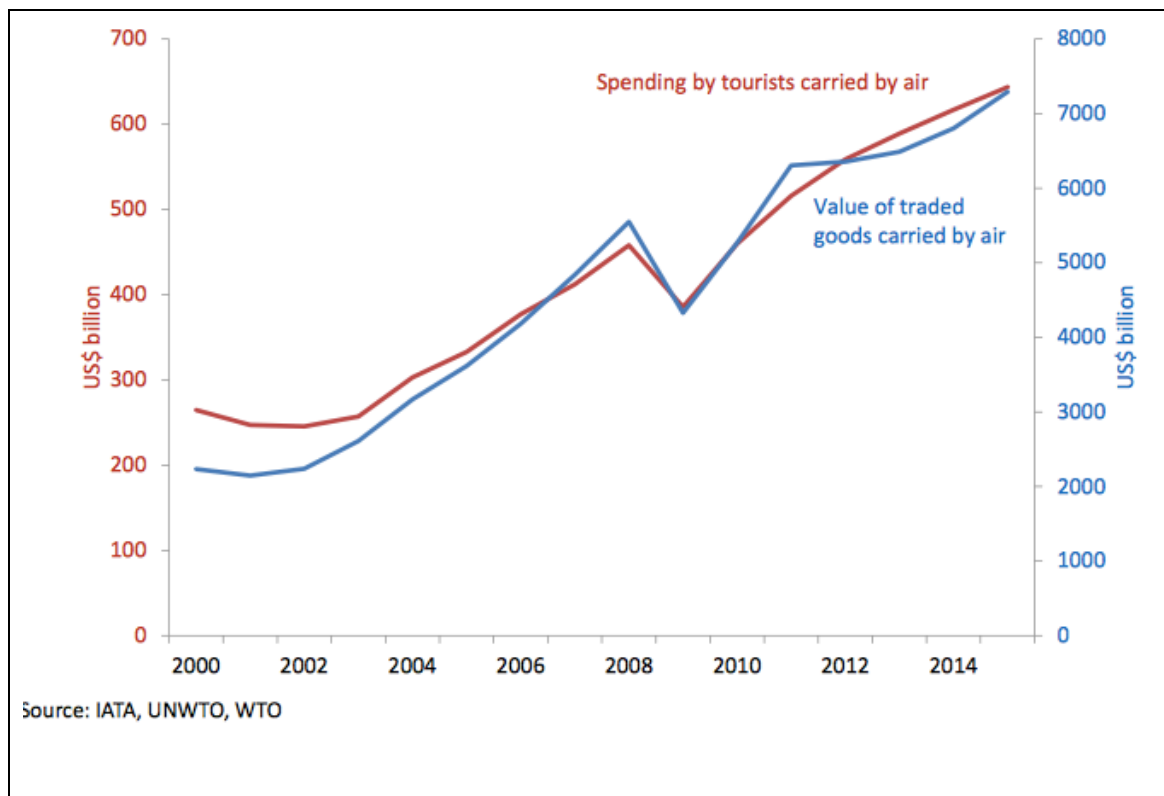


Figure 6. Value of trade carried by air and the spending of tourists (Source: IHS Global insight, UNWTO, IATA)

Through the above graph, the value of cargo airline literally exceeds the spending by air passengers from 2005 to 2014. Additionally, according to statistics of International Air Transport Association (B, Pearce 2015), the internationally traded goods through air transport account for 35% of total international trade. The consequence of global recession in 2008-2009 resulted in a sharp decline in value of cargo carrier and passenger during that period. Additionally, the global recession also negatively impacted on net profit of many worldwide airline carriers. Some had to reduce the capacity growth such as Air France-KLM and Lufthansa to save the budget, or Cathay Pacific reported the biggest loss in its 63-year history; moreover, even the Ryanair

which was lost-cost carrier had to suffer from a loss in 2008 (K, Done & G, Wiesmann 2009). The below graph shows the net profit of all commercial airlines in recent-decade period. In 2015, net profit remarkable increased to 29.3 billion US dollars, as compared to a loss of 5.6 billion US dollars in early 2004.

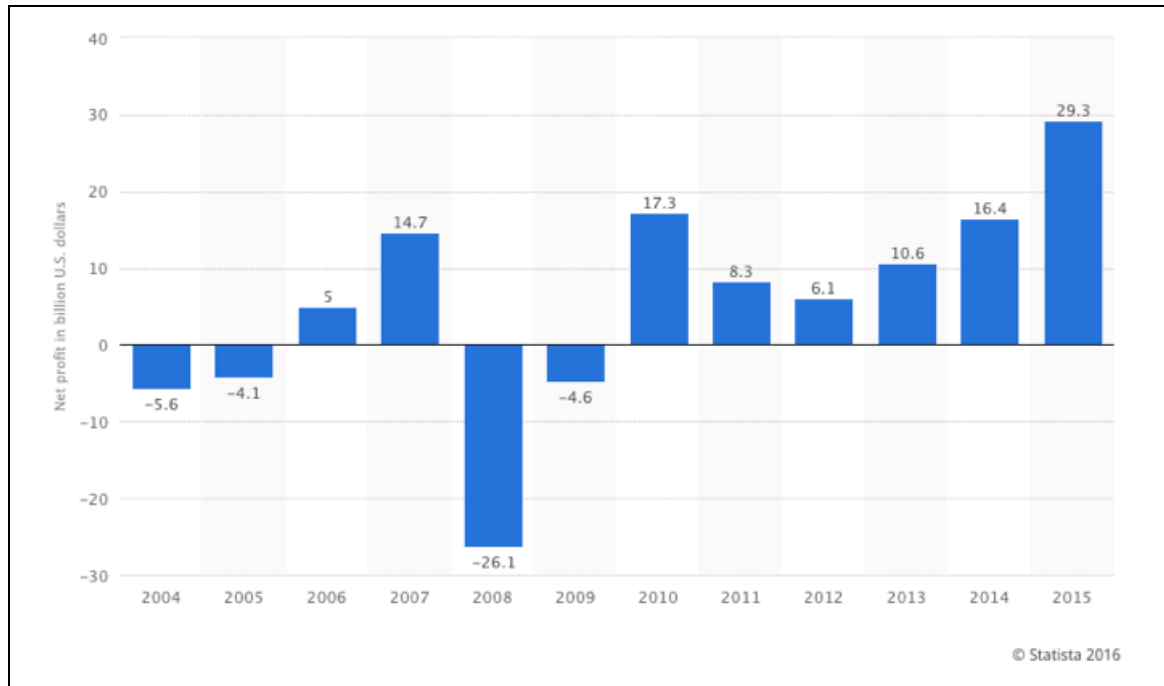


Figure 7. Net profit of commercial airlines worldwide from 2004 to 2015 (in billion US dollars) (Source: Statista 2016)

Return on capital (ROIC) is the reward for equity owners for risking their capital put in the airline industry; according to the IATA (2015), it has never been higher than the cost of capital (WACC) from early 2000 until 2014. This caused a great loss the for equity investors due to a fierce competition of many carriers, large operational costs and many challenges in this risky industry. However, in 2015, the first time ROIC climbed to 8.3% which significantly created value and paid off the risk for those equity investors. Based on IATA statistics (2015), the difference between ROIC and WACC was 1.6% which increased by 2.1% compared to -0.5% in 2014. Subsequently, the airline industry is predicted to generate 8.6% return on invested capital in optimistic future that will create significant value for its investors. Nevertheless, this return is believed to be sufficient with equity investors’ risk and no more than that. Low bond yields are expected to make the cost of capital fall under 7.5% which would drastically contribute to positive airline achievements in 2016. (IATA 2015).

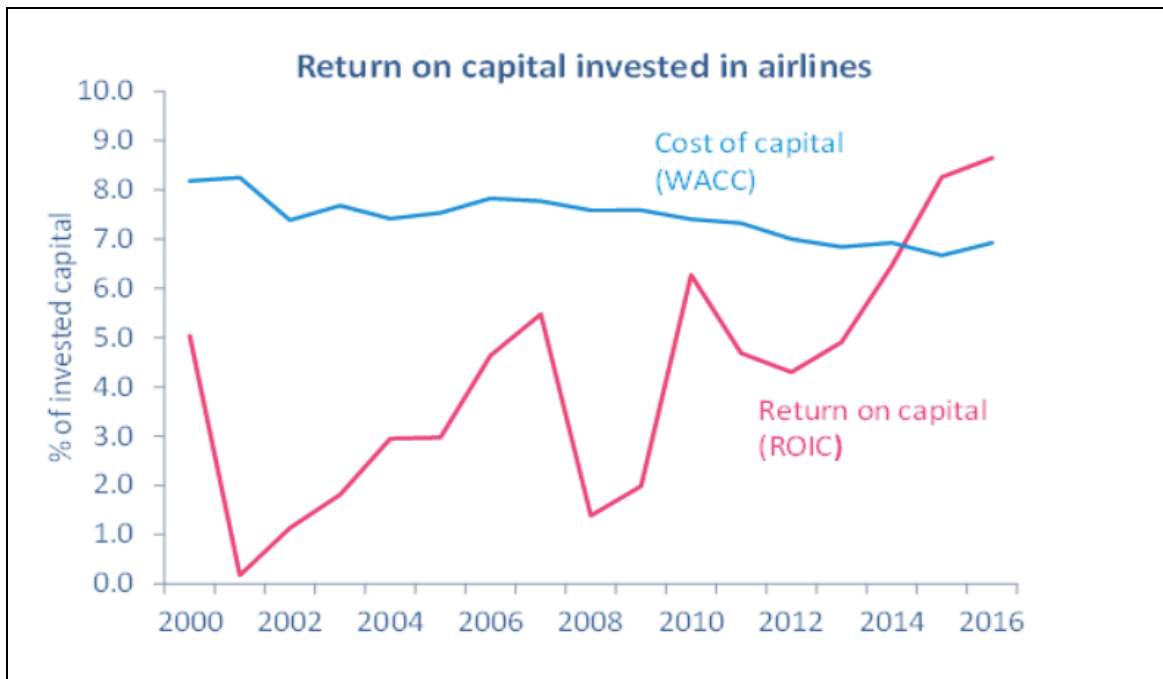


Figure 8. Return on Capital invested in the airline industry (Source: IATA, McKinsey)

3.2 Major events that influence the airline industry

These following events are factors happening at the beginning of 2001 until now that left a significant impact on the global airline industry.

3.2.1 Terrorist attack

The tragedy in September 11 2001 in the United States of America changed the whole dimensions of global aviation and aviation industry is more secured today than in 2001. From aviation's security standpoint, a lot of changes were made in security screening, identification passenger information, checkpoint, liquids allowed and data sharing program. This terrorist attack caused a reduction by 37,795 flights in December 2012, as compared to September 10 2012.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011 ⁺
Revenues (\$ billion)	329	307	306	322	379	413	465	510	564	482	554	598
Passenger growth %*	8.6	-2.7	1.0	2.3	14.9	7.0	5.0	6.4	1.5	-2.1	7.3	4.4
Passenger numbers (millions)	1,828	1,793	1,792	1,849	2,064	2,211	2,328	2,497	2,507	2,479	2,681	2,793

Figure 9. Global impact of terrorist attacks on revenue (\$ billion), passenger growth (%) and passengers number (millions) (Source: IATA, 2001)

In global scale, due to the long-lasting adverse impact of the tragedy, revenue from the airline industry fell from USD 329 billion to USD 307 billion and this number was gradually recovered from years to year after 2001. In US market, according to IATA statistics (2011), USD 19.6 billion was subject to a loss for airline revenue in this particular market.

3.2.2 Diseases

SARS coronavirus was a respiratory disease which was reported in 2003 in Asia. Besides, it was considered to be one of the avian flues which caused a strong economic damage on the worldwide scale. The fatal disease itself dramatically effected on the Asia's travel and tourism industries. The experience of SARS was one of the most obvious evidence showing that the airline industry was directly vulnerable to the global events. China and Asia Pacific were the regions suffering the worst damage from SARS impact (BBC News 2003). During a outbreak fatal disease period, a large number of people had to avoid flying to Asia Pacific destination, and there were some changes due to the flight booking which boosted the income for many carriers (Teresa Cederholm 2014). Nonetheless, a remarkable amount of flight cancellation beat down the revenue flow from booking system that led to a big loss for a lot of carriers. Hong Kong's flag-carrier, Cathay Pacific was subject to a loss of USD 3 million per day and 29% capacity of cabin crew members was asked to cut off by Singapore Airlines (The Economist, 2003). Additionally, Japan Airlines, Korean Air, and Qantas had to cut down services due to SARS. (Aviation Today 2003).

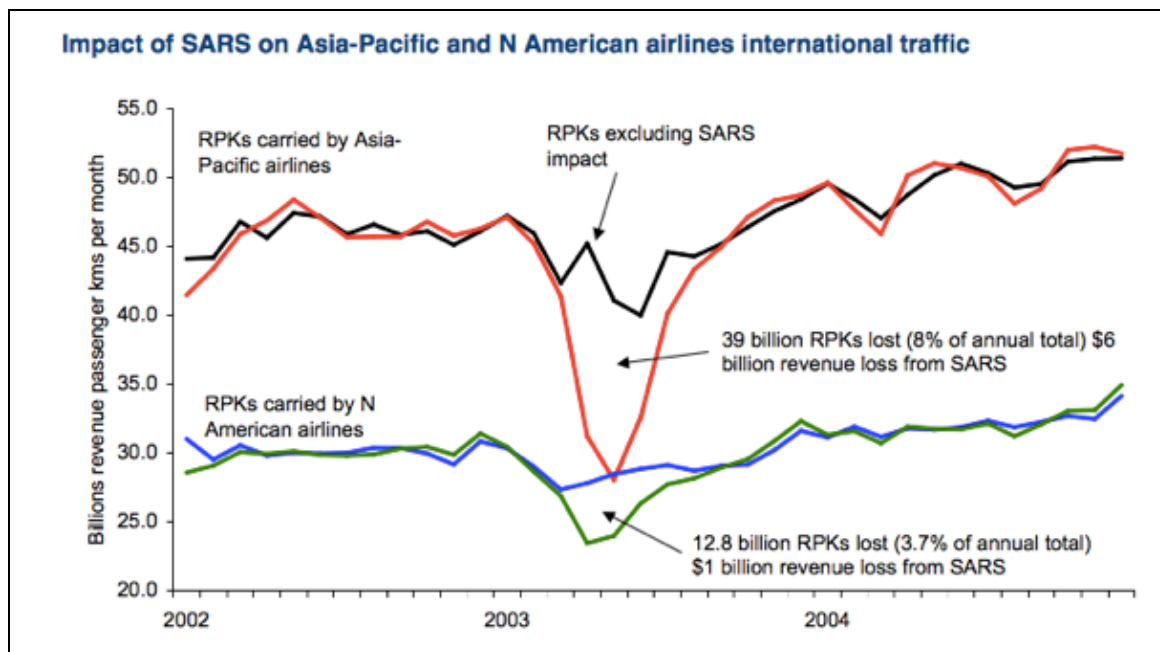


Figure 10. Impact of SARS on Asia-Pacific and North American airlines international traffic (Source: Yahoo Finance)

According to IATA (2006), due to the SARS disease, the Asia Pacific airlines suffered from a loss of 39 billion revenue passenger kilometers (RPKs), or approximately 8% of revenue loss. Following the big loss of Asia Pacific Airlines, North American Airlines lost USD 1 billion from SARS.

Ebola was another virus disease which happened in 2014 and it also left a severe damage to some African airlines (Justin Worland 2014). Ebola spread to the whole West Africa area, and this led to a lot of flights cancellations to West Africa sub-region which caused a big loss in many African airlines. Ethiopian Airlines lost USD 8 million a month due to the outbreak of this virus (V, Bryan 2014).

3.2.3 Low-cost carriers airlines in Europe

Deregulation stimulates the introduction and competition for low-cost carriers (LCC). In 1997, European agreement allowed one owned-state carrier to fly to another state's domestic market. Currently, there are a lot of LCCs in different markets such as Ryanair, Eurowings and easyJet in Europe, JetBue, Southwest Airlines, and so on in United States market. Totally, LCCs account for 25% worldwide airline market and they have been rapidly emerging recent years. In 2006, LLCs carriers accounted for

29% in US and Europe market. In the Asian market, market share of LLCs makes up approximately 5%, and this number was predicted to significantly rise since there would be more air passengers in these fast developing regions. (IATA, 2006).

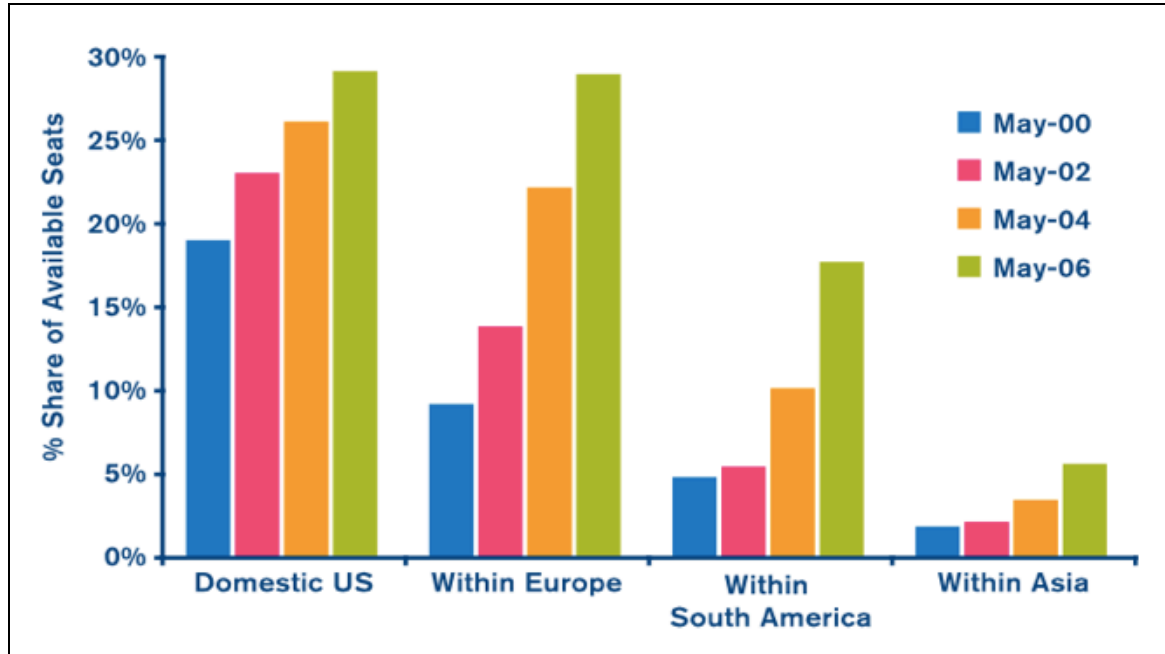


Figure 11. The growth in market share of LCCs (Source: SRS Analyser)

The emerging LLCs all over the world has led to a strong competition with existing carriers due to LLC's competitive advantage on price, or new route, new demand. However, FSNCs still had some certain advantages over LLCs such as joint venture, code sharings or frequent flyer program. Moreover, with the low cost of ticket fair and high operational costs, LLCs still faced many challenges in operating.

3.3: Return on Invested Capital, 1996-2004

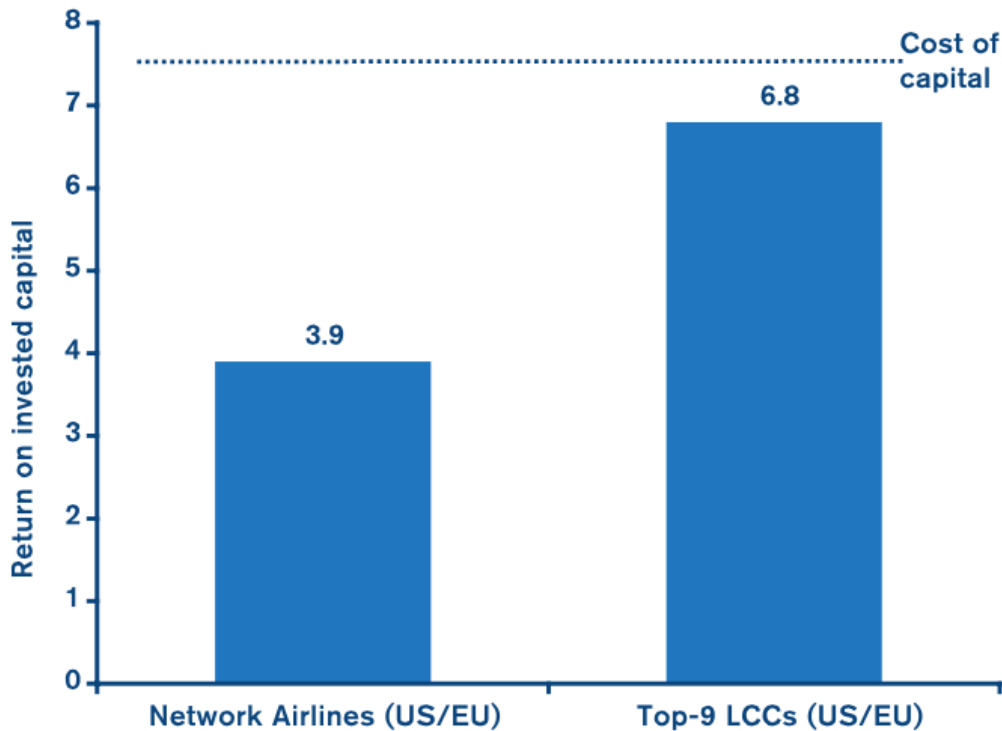


Figure 12. Return on invested Capital 1996-2004 (Source: SRS Analyser)

According to SRS Analyser, during the period from 1996 to 2004, LLCs generated higher return on invested capital (ROIC), as compared to weighted average cost of capital (WACC,) than network airlines. In another meaning, equity investor could expect a higher return to pay-off their risk putting in the airline investment from LLCs. (see IATA 2006).

3.2.4 Fuel price

One of the remarkable cost of an airline company is in fuel efficiency which accounts for 40-50% of operating expenses (E, Clayton & A, Hilz 2015). All above mentioned factors negatively affected on the airline industry revenue; however, fuel price drop opened an optimistic future for the airline industry as a whole.

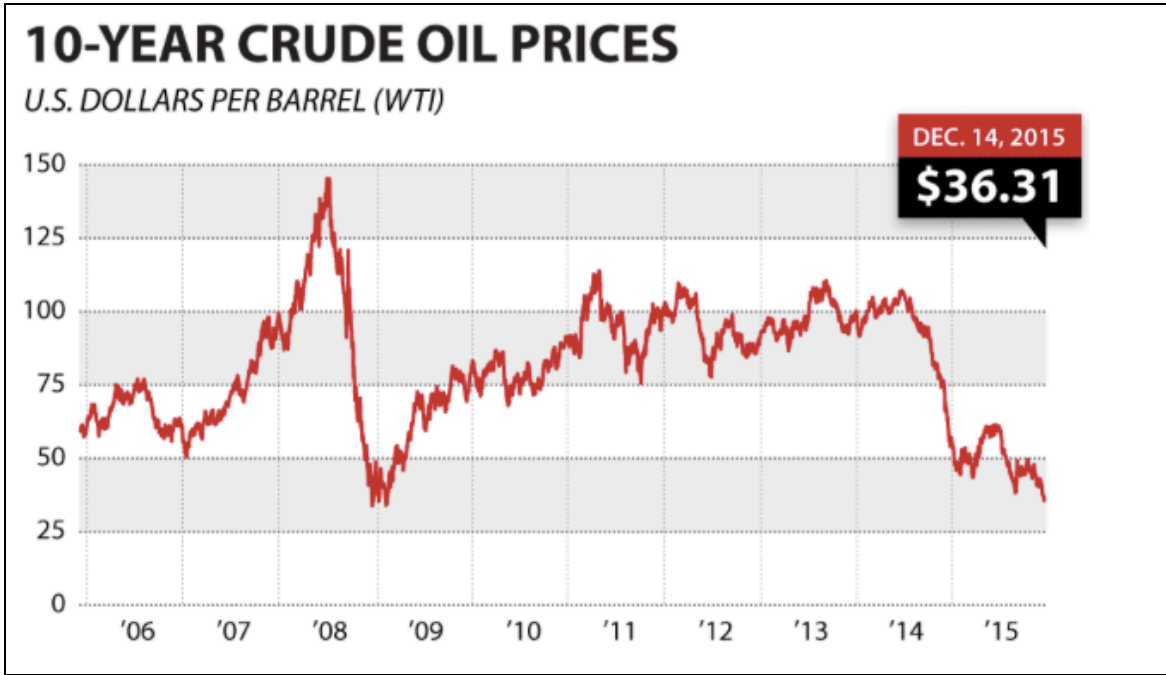


Figure 13. 10-year crude oil prices (Source: CBC News 2015)

The crude oil started to fall in 2014 at the approximate price at USD 62 per barrel, and it priced down sharply in couple months later until reaching the price of USD 34 per barrel in January 2016 (see CBC News 2015).

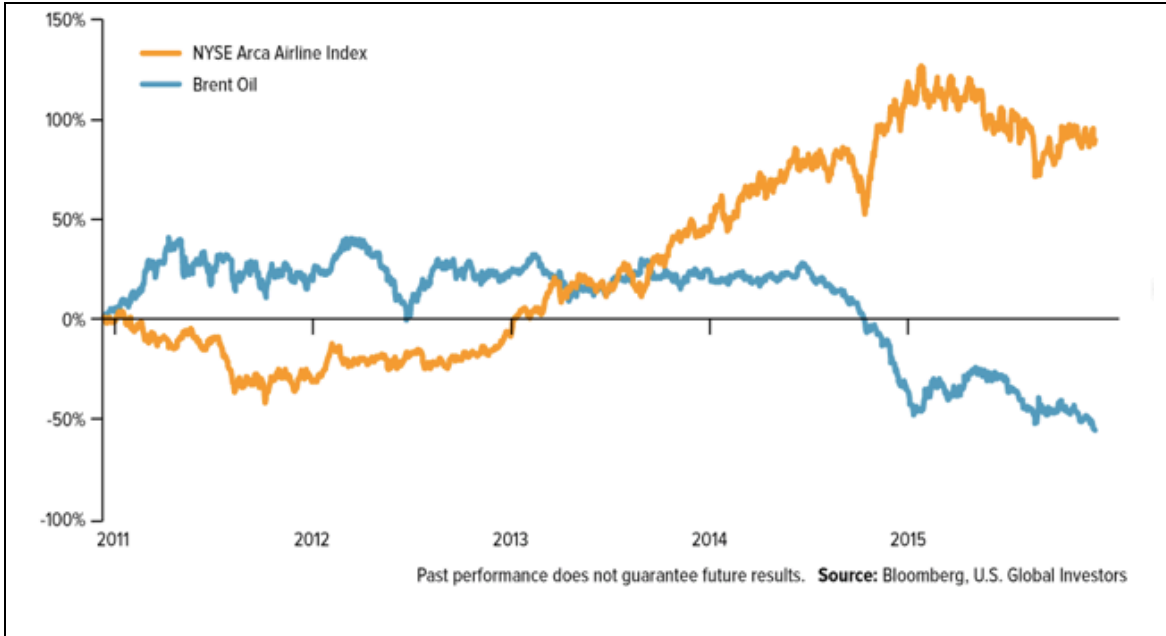


Figure 14. Low oil prices have been a huge windfall for airlines (Source: Bloomberg, U.S Global Investors)

The airline industry saved 33 billion dollars in net profit during 2015 due to the decrease of fuel cost and air passenger demand raise. The sharp fall in fuel price unexpectedly led to huge savings for global airlines industry. According to IATA statistics (see Advisory perspectives 2015), the world demand is predicted to rise by 6.9% in 2016 from 6.7% from one year ago, and together with the low fuel price, more fuel efficiency will be generated by airline carriers.

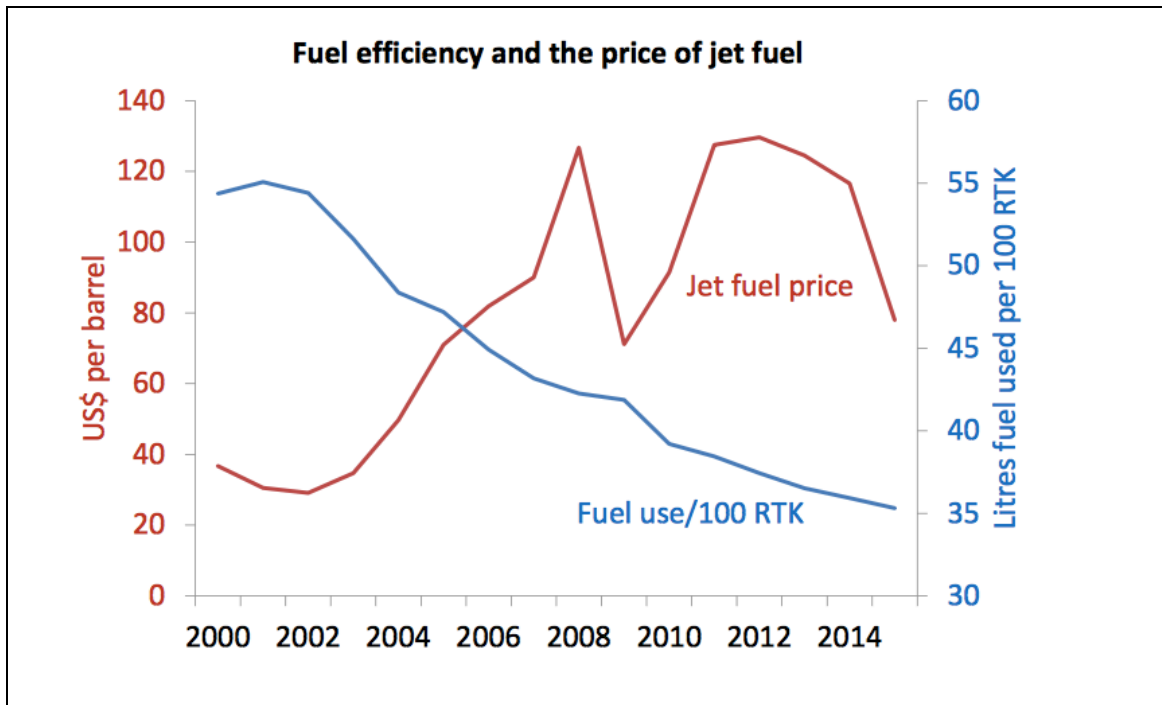


Figure 15. Fuel efficiency and the price of jet fuel source: IATA)

With the introduction of many LLCs, many FSNCs are putting their first priorities to manage and improve cost in order to survive and growth (Air Transport and Airport Research 2008). From LLCs' perspectives, high costs for long-haul flight and low air fares offset for an amount of air passenger demand that requires them to efficiently handle the operational costs. The reduction of oil price made the fuel consumption per available ton-kilometer (ATK) decrease which could help to save the budget by USD 3 billion of fuel cost (IATA 2015). Substantially, the fall in oil price did effect on many important strategies and future of almost carriers all over the world, which can be economical new aircraft, extended lease life of old craft or fuel efficiency operating.

3.2.5 Other factors

The global crisis in 2008-2009 was one of the significant events that adversely influenced on the airline industry and most of the consequences were mentioned through above graphs. Not only did it affect on net profit, revenue of the global airline industry, but also it had an impact on transport demand due to a sharp decrease in transported passengers and freight (Ruchi Goyal, et al. 2014). Many companies went bankruptcy; therefore, it led to a reduction of supply and this crisis did put every single carrier in a threatening position.

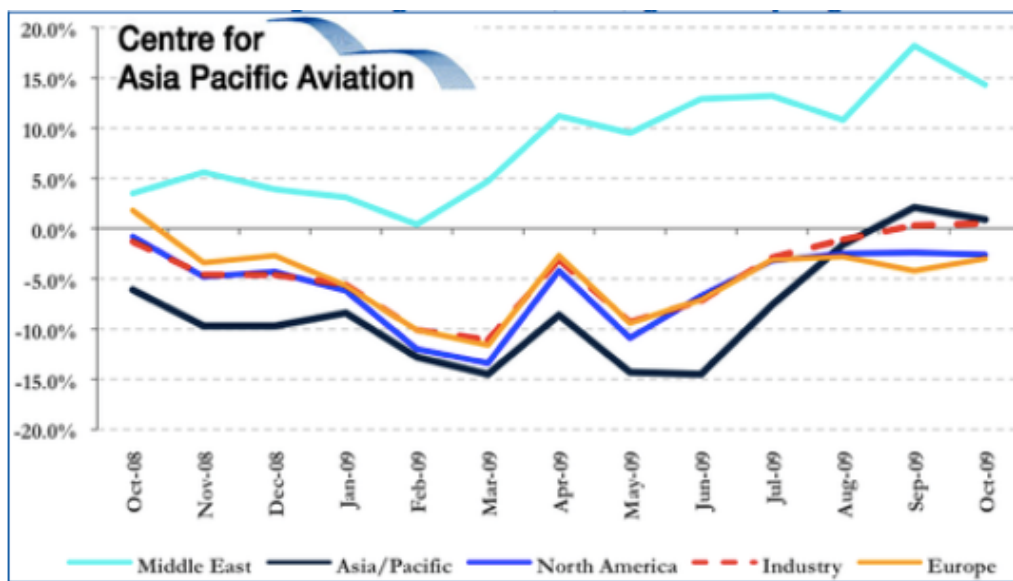


Figure 16. IATA international passenger traffic (RPK) growth by region: Oct 2008 to Oct 2009 (Source: Centre for Asia Pacific Aviation & IATA).

The airline industry took two years to recover itself from the global crisis in 2008 (News.com.au 2010). As can be observed from the graph above, the demand of air passengers declined from October 2008, and it negatively kept decreasing until early September 2009. This recession effected on the Asia Pacific, North America, Industry and Europe most compared to Middle East region. The Asia Pacific carriers which were the largest players in the cargo market were damaged seriously from a drop in demand for cargo and passengers. Influenced by the crisis and high oil price, many airlines experienced a great loss in profit during that time. According to the CEO of IATA, more airlines went bust because of the global crisis than because of the tragedy of 9.11

terrorist attack. Therefore, the airline industry needed to have a strong liberalization (IATA 2008).

4 ORGANIZATION PROFILES

4.1 Finnair

Finnair is a Finnish airline brand which is considered to be one of the most innovative, safest airlines all over the world. The airline has been trying to become the leading airlines in the Nordic region by using its advance of geographical position between Europe and Asia. Substantially, its mission is aiming at the smoothest and quickest connections through Helsinki hub; besides, trying to deliver customer experience, shareholder value is the key value that Finnair is trying to reach. Finnair is a national airline which is owned by Finnish government with 55.8 percent holding. Finnair is also in the joint business with Oneworld alliance partners Japan Airlines and British Airways for traffic between Europe and Japan in April 2014. Based on the geographical location that is the shortest route from Europe to the Far East pass through Helsinki, Finnair has the competitive advantage among many European airlines. Based on its advantage, it made sure about the punctuality of flights, good customer service, and reliable rating of over 98 percent for connecting flights. Currently, Finnair is strongly aiming at doubling the Asian traffic by 2010 from the 2010 level, delivering a unique customer experience, achieving world-class operations and creating shareholder value. In addition, Finnair is the first European airline to launch the Airbus A350 XWB aircraft in long-haul traffic. Other Finnair's shareholders include public bodies, financial institutions, private companies and households. Furthermore, about Finnair's main operations, it is responsible for scheduled passenger, charter traffic, cargo sales, customer service and service concepts. The most significant operations of Finnair, like any other airlines, are flight operations and some activities related to procurement and financing of aircraft which account for a large percentage of Finnair operating expenses. The distributing operating expenses are constituted with the largest proportion of fuel, personnel, ground handling and traffic charges with 28%, 25%, 11%, and 10% respectively. Moreover, in 2014, Finnair released the A330 and A350 aircraft in two-year time that were the most modern long-haul fleets in Europe in order to improve the customer's experience.

There are two main business areas that Finnair is focusing on which are Airline Business and Travel Services. In the airline business, it includes all activities concerning the cargo sales, customer service, service concepts, flight operations and activity with procurement and financing of aircraft. Capacity for Asian traffic fell in 2014; on the other hand, European traffic increased by 0.9 percent, and capacity declined by 6.2 percent in North Atlantic traffic. As mentioned, Finnair's cargo which forms a large proportion of Finnair's revenue continued to increase in 2014. In travel services, it consists of tour operator Aurinkomatkat, its subsidiary operating in Estonia, business travel agent SMT and its subsidiary Estravel which provides service of hotel packages, flights and cruises and other additional services regarding tourism. (see Finnair Annual Report 2014).

In 2014, due to the decrease in Asian traffic, the contraction of Aurinkomatkat Suntour's revenue, the cost of restricting of aviation services, the declining purchases by tour operations and weak development of cargo, Finnair's revenue decreased by 4.8%. Additionally, there were some declined costs as compared to the revenue of Finnair in 2014. Due to the decrease in market price of fuel and in capacity, fuel costs dropped by 4.3% year-on-year. Euro-dominated operational costs fell by 2.8% subsequently. In the income statement, there was a noticeable change in the fair value of derivatives and in the value of foreign currency-denominated fleet maintenance reserves; however, they did not influence the cash flow. The biggest capital expenditure of Finnair in 2014 was spent on business class renewal of the long-haul fleet and engine performance restorations. About aircraft sale and lease agreements, Finnair has been trying to own about half of the fleet it operates; furthermore, it tried to make the financing costs for the fleet as low as possible.

The volcanic eruption had a big impact on Finnair recently in 2010. Early in 2010, Finnair had to cancel flights to northern Finland, UK and Scandinavian areas due to the volcanic ash coming from Icelandic volcanic eruption (Finnair 2010). The loss from a volcanic eruption was deeper than the Finnish national flag carrier expected. It caused the disruption the travel of more than 140,000 passengers and a big loss was spent on passengers' accommodations. The revenue passenger kilometers declined by 23% in April compared with the previous year and schedule traffic was 16% lower. The volcanic ash cloud did cause a loss around EUR 20 million for this Finnish airline. (E,

Lamppu 2010). However, due to the fear that competition among airlines would be distorted, Finnair refused to receive the subsidy by the European Union.

4.2 Scandinavian Airlines

According to IATA, it is forecasted that stable European economy would lead to the increase in earnings per passenger for the airlines in Europe, and competition between many airlines in the same region would rise subsequently. Nordic air travel takes a large proportion compared to the rest of Europe. This fact is due to the relatively long distances, difficult topography, small towns and sea-surrounded Nordic countries area. All of those factors motivate people in Nordic to choose the short-haul fleet in order to be more accessible with any area in the Nordic region.

Finnair and SAS have been long-time competitors in the airlines industry in the Nordic region. Substantially, SAS is the largest airline in Nordic area with the cooperation among three countries namely Sweden, Norway and Denmark. SAS AB is a Swedish public limited company registered in Stockholm and it is the parent company of the SAS Group. There are three main hubs which are Copenhagen, Stockholm, Oslo, and they are under Group's operations. It is focusing on two main businesses which are air cargo and aviation services at selected airport. Innovation and high performance are missions that SAS is concentrating on to make its customer easily approach to SAS. SAS belongs to the Star Alliance, and this is the base for SAS to provide its customers with access to a far-reaching network. During the 2013-2014 period, SAS concentrated on the priorities which were building an efficient operating platform, winning the battle for Scandinavian's frequent travelers with other airlines and investing in future. One of the strategies was successful with the increase of a number of scheduled passengers by 6.3% while the load factor rose at the same time as well. More destinations and more departures were being focused and this was successfully proven by its strategy of strengthening 50 selected routes and opening new nine routes in 2015. At the start of 2015, new cabin interiors and horizontal seats in SAS business class would be upgraded in long-haul aircraft; moreover, more investments on long-haul fleet would be boosted in order to improve customer experience. One of the main focus of SAS's business operations is short-haul flight; however, it is still trying to expand to intercontinental market despite dramatically increased competition. SAS's strategy of investing in future

apparently includes modernizing long and medium-haul fleets. An international route, Stavanger-Houston, was opened with frequent travelers and in 2015, SAS is trying to open a new route between Stockholm and Hong Kong. SAS has been spending a lot in significant investments such as Airbus A330 aircraft, spare parts, engine maintenance, system development costs, ongoing aircraft enhancement, and some advanced payments to Airbus in 2014. Furthermore, SAS has been trying to improve the ground handling such as baggage drop services and boarding process for optimizing its operations and customer satisfaction. SAS enhanced streamline the aircraft fleet as its prioritized strategy; therefore, in 2012, it only had four aircraft by reducing the number of aircraft it is owning. (see SAS Annual Report 2014/2015).

On September 2013, SAS sold 80% shareholdings of Widerør's Flyveselskap AS to an investment company and this sale made a large impact on SAS's income statement in the 2012-2013 period. Aircraft acquisitions accounted for the large proportion of SAS's operating expenses. For the consolidated statements, they consisted of all financial statements such as separate net assets, tangible and intangible items of Parent Company and all subsidiaries. All earnings and comprehensive income from Group was contributed to the parent company's owner, but intra-group transactions, balance-sheet items, revenue and expenses are not. Parent Company prepares its financial statements in EU-approved IFRS under Swedish Annual Account Act and Swedish Financial Reporting Board. One of the remarkable influence for SAS Group earnings was the currency effect since its operating expenses and some financial items were effected by exchange rate fluctuations such as the Swedish krona weakness during the year.

In 2012, SAS nearly went bust since it was being damaged from a big drop in customer's demand, economic downturn, high costs as compared to LCCs such as Ryanair, EasyJet, and Norwegian Air Shuttle. At that time, SAS was concentrating on short-haul flights, as compared to revenue-derived from long-haul flights such as Lufthansa, Air France, KLM. That consequently led to a big loss due to the introduction and expansion of low-cost carriers. (R, Milne & A, Parker 2012). There were some additional issues SAS was facing then which were centralization of administration functions, outsourcing of call centers and ground handling, new pension and union agreements. During that difficult time, cutting down pensions, salaries, benefits curbs, around 800 jobs and thousands of employees were considered as the final call to save

this airline company if SAS could agree on those cuts with their labor unions (the Guardian 2012).

4.3 Finnair and SAS competition

These two airline companies were big competitors in Asian air travel market when Finnair opened its first routes to the Asian market in 1976 (CAPA 2015). In 1949, SAS started to access to Asian market by frequent flights with strong and active unions. Finnair was initially SAS's competitor in the Asian market in air travel by opening its route to Asia in 1976. Currently, Finnair has around 10 flights a day to North and Southeast Asia and its operations including some flights and seats in Asian market as compared to SAS. Since 1992, due to the different vision of development, Finnair and SAS were seen as potential competitors in the traffic market between in Finland and Scandinavian. During that period, there were three main elements forming a strong competition between the two airlines in Nordic areas: Helsinki and Stockholm, the international air outside of Helsinki and Russian aviation market. The route between Helsinki and Scandinavian accounted for 31% of all passengers originating in Helsinki-Vantaa airport, compared to 13% for the route between Helsinki and Germany that made Finnair be conscious about its competitive situation. Subsequently, it led to the competition about airfares and services between the two airlines in this region. In 1987, there were only 200 passenger-kilometers per capita in domestic air traffic in Finland, while that number in Sweden was doubled (Konkurrens inom linjetrafik 1993). After a few years, SAS started to open new routes to Asian market in 1949, and Finnair tried to compete by extending to the Asian market in 1976. Currently, with a higher number of routes and seats available in flights operating in Asia, Finnair also reached its big competitor SAS by taking advantage of Helsinki hub to offer the fastest connection between Europe and Asian market. Finnair is largely dependent on long-haul markets such as North Asia and Southeast Asia, and it leaves the short-haul market for SAS. On the other hand, North America made up for 18% in total 24% of long-haul markets in SAS in 2015. At the beginning of 2015, SAS opened new flight to Hong Kong from Stockholm which was the fourth destination in Asia and this airline has served as the first non-stop carrier in the market. However, Finnair accounts for 26% as the biggest share in the Stockholm-Hong Kong route as a connecting traffic. Currently, Finnair serves 20 destinations from Stockholm with around 50 flights per day. Moreover, it

wants to operate more services to compete with SAS. (Aviation Strategy 2016). In October 2015, the Finnish airline became the first European operator and third worldwide to receive the new Airbus A350 Extra Wide Body aircraft. By operating more aircraft than SAS, Finnair found it easy to re-fleet, but SAS had more efficient aircraft for longer. (CAPA Centre for Aviation 2015).

5 ANALYSIS OF FINANCIAL RATIOS AND RESULTS

5.1 Profitability ratios

- **Net profit margin** $= \frac{\text{Net income}}{\text{Net sales}} \times 100$

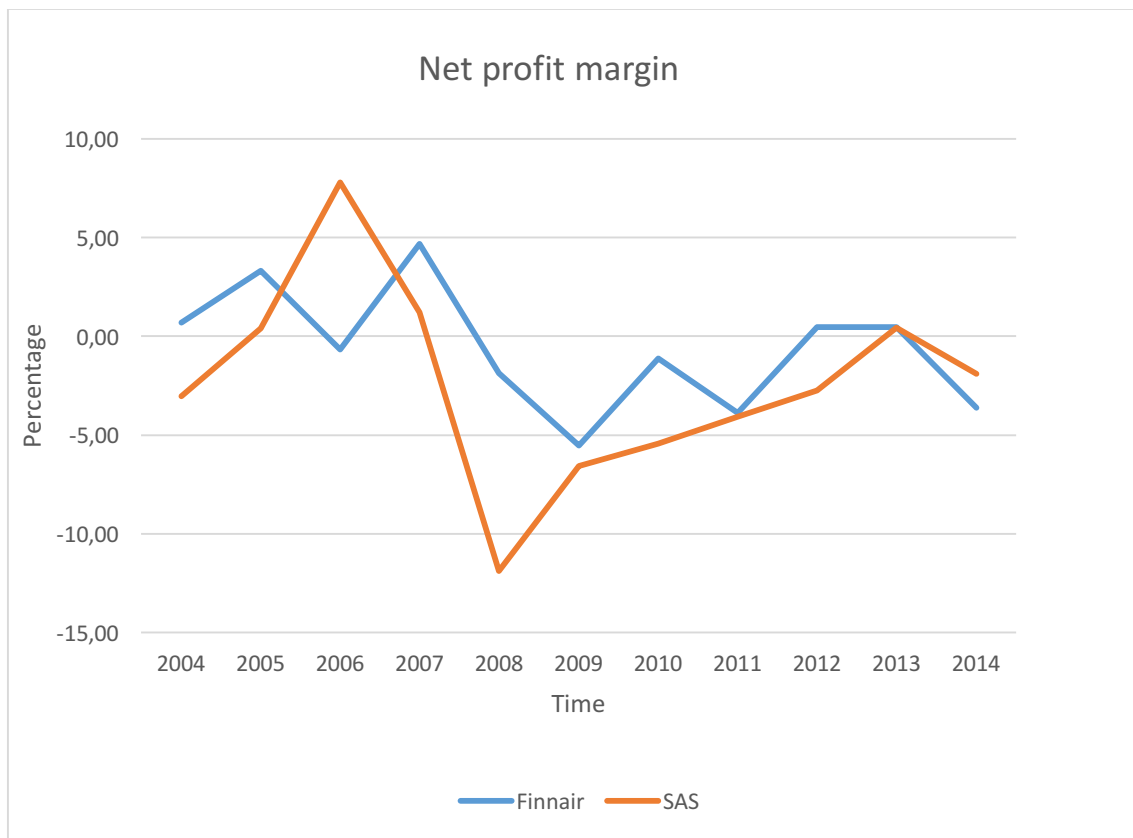


Figure 17. Net profit margin between Finnair and SAS (%)

Analysis: Net profit margin measures how well a company can convert sales into profit excluding all expenses. Generally, the trends reach their high peak during 2006 to early

2008 before a sharp decrease in next two years which were used to be the global crisis. After a gradual increase until 2013, net profit margin ratio started to fall in early 2014 in the two airline companies. As mentioned, the revenue from the airline company is mainly collected from passenger and freight. A rise in passenger demand in some recent years which was analyzed above drove up the revenue earned from 2012 to 2014. This shows that companies would be in an advantageous position in benefiting from the increase in passenger growth. Finnair reached its highest net profit margin in 2007 which was around 4.68% in the 10-year period, compared to SAS's at 7.80% in 2006. Finnair experienced high turnover and profit in 2007 because of an increase in aviation services, passenger kilometers of member airlines, leisure traffic, and cargo capacity in Asian traffic which was due to the acquirement of two long-haul Airbus A430 aircraft. The increase in revenue in SAS in 2006 by 6.4% was due to an improvement in diligent cost control, capacity, and positive yield trend. However, in the period of 2008-2009, two airlines suffered severe damages from a decline in passenger demands, cash flows and financing problems. A decrease about 267% in 2009 from Finnair's net profit margin in 2005 has resulted from a drop in both demands, prices and cargo price levels. The same reasons happened to SAS in 2008 with -11.88% net profit margin with uncertainties remained regarding the price of jet fuel. Nevertheless, operating revenue of SAS was reduced because there was a discontinued operation from selling Spanair, which led to a negative net income at the end of 2008. A negative net profit margin showed that a company spends more than it earns during a particular period. During a 10-year period, the average net profit margin for the whole industry was negative for four out of ten years due to a drop in passenger demand, but this number has been increased recently. Airlines achieved a 1.1% of revenues in 2012, 1.8% in 2013 and 2.6% in 2014 according to IATA (2013). It is clear that the fluctuations of the net profit margin of Finnair and SAS correspond to those of annual growth of air traffic passenger demand during the same period. For the period of 10-year, the fluctuation of Finnair's net profit margin seemed to be more stable than SAS.

- **Return on assets (ROA)** = $\frac{\text{Net Income}}{\text{Average total asset}} \times 100$

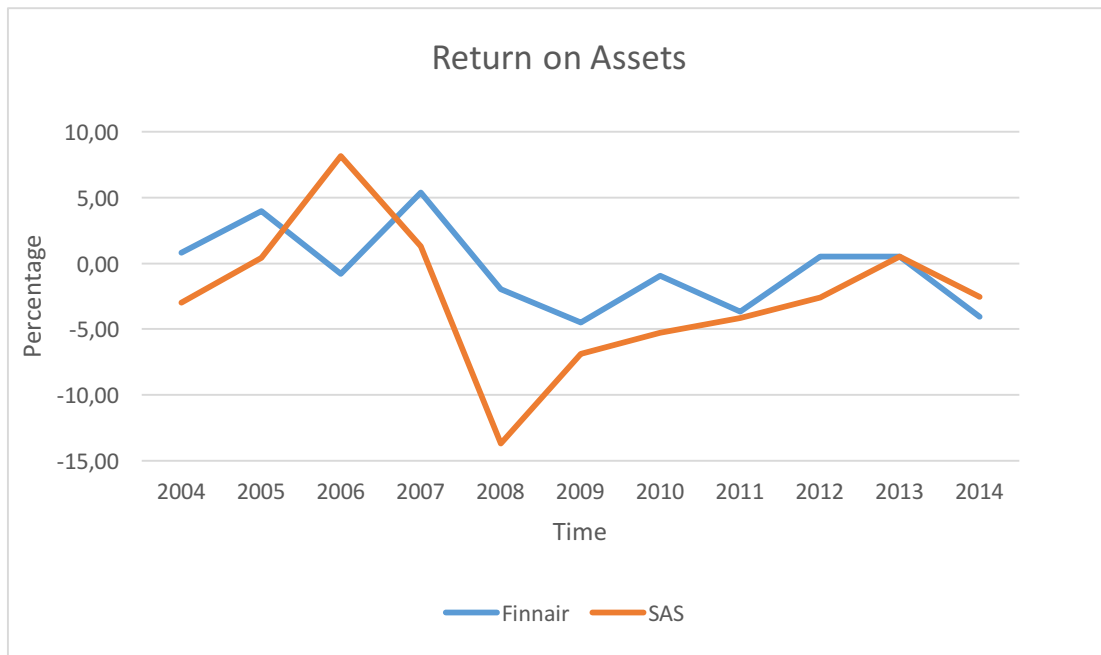


Figure 18. Return on Assets between Finnair and SAS (%)

Analysis: This ratio is displayed as a percentage and it measures company's ability to generate earnings from total assets. Since this ratio depends much on the characteristics of each industry, ROA efficiently reflects the its competitive advantage as compared to another company in the same industry. ROA has the same trend as the net profit margin in both companies in the same period generally. It is noticed that both Finnair and SAS improved the ROA measure after 2008-2009 as the whole economy began to recover that resulted in growing demand for air traffic. SAS experienced lower ROA which was -13.72 compared to Finnair due to discontinued operations, the decrease in an intangible asset such as goodwill. On the other hand, in the same period, Finnair had generated higher total average asset by 7.3% in 2009 than in 2008, but due to greater loss in net income, its ROA was at the rate of -4.5%. In subsequent years, the increase in total assets and positive net income made the ROA of both airlines increase; however, this trend was followed by a sudden drop that led to negative net income for both companies. The ratio substantially well reflected the situation of generating earnings from total assets. The weak development of cargo, restructuring of aviation services in Finnair in 2014 made this airline company suffer from greater loss compared to SAS by 1.48%. Even though there was a gradual increase in the overall trend of both airline companies after 2008-2009, the negative returns on assets from two companies indicated not really good performance of the companies' management on total operational assets. However, in the airline industry, a relatively low ROA could

represent substantial absolute profits since the airline industry is likely to be a capital-intensive business.

- **Return on equity (ROE)** = $\frac{\text{Net Income}}{\text{Equity} + \text{Non-controlling interests (average)}} \times 100$

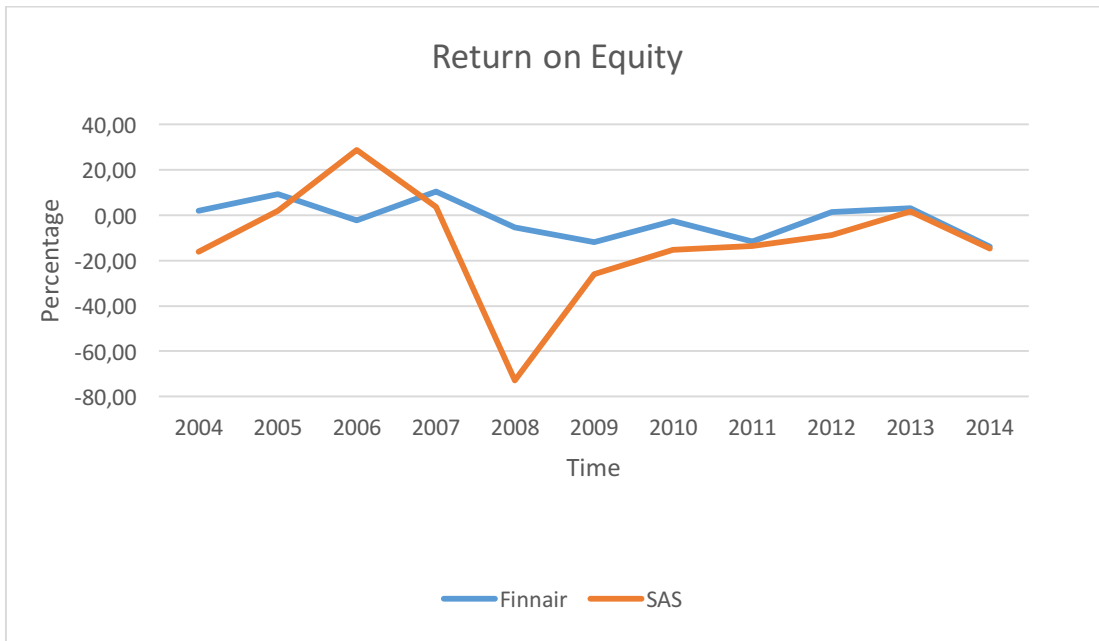


Figure 19. ROE between Finnair and SAS (%)

Analysis: ROE is one of the most widely used ratios that stakeholders prefer to look at to know how well company generate earnings from their investments. It is shown as the percentage as result for the financial year to the sum of shareholders' equity and non-controlling interest. The ratio of 1.91 for Finnair in 2004 means that 1.91% of profit has been gained based on the equity from shareholders. ROE of the Finnish airline has not remarkably fluctuated compared to that of SAS. Besides, the profit that SAS airline expected to earn on the stockholder's investment increased to 28.92% in 2006 but it sharply dropped by 151% into -72.81% in 2008. SAS experienced negative ROE due to the negative income and the reason was fall in average unit revenue, overcapacity, high jet fuel price. However, SAS airline did maintain a level of indebtedness and equity/asset ratio at the rate that the company wanted to be considered as an attractive borrower. In 2008, the discontinued operations with the selling of SAS Media and Facility Management resulted in a capital loss that made the dramatic drop in net

income. Moreover, 2008 was known as a period of record-high oil prices and financial crisis that caused plummeting demand for goods and services. Therefore, the decrease in air traffic passenger demand all over the world did effect on the airline industry. The 2008 financial crisis effected on Finnair's fleet modernization through the cost of borrowed capital, downward trends for cargo demand and price level of lease agreement until 2009. Subsequently, ROE started to increase in next couple years and decreased a bit in early 2014. In 2014, the ROE for the whole airline industry was 2.64% (CSIMarket 2015). This rate was -14.65% for SAS and it was less than that of Finnair by 0.85%. Compared to the average ROE for the whole industry, that meant that the two airline companies did worse than the average rate.

- **Return on capital employed (ROCE)**

$$\frac{\text{Earnings before interest and tax (EBIT)} + \text{financial expenses}}{\text{Average capital Employed}} \times 100$$

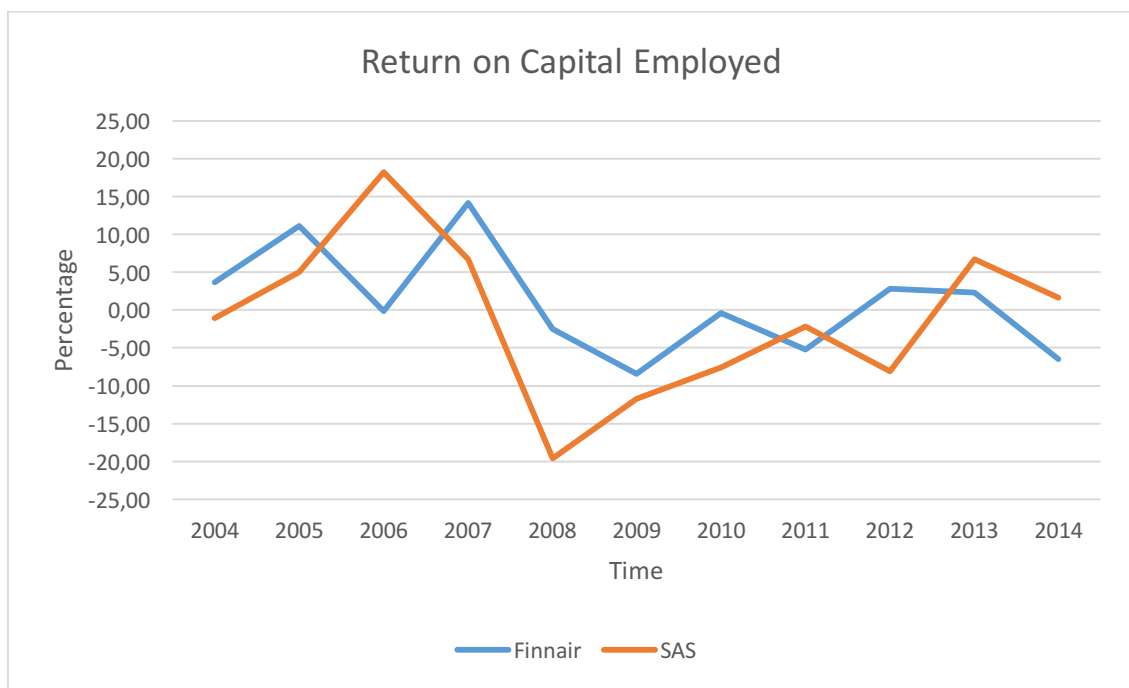


Figure 20. ROCE between Finnair and SAS (%)

Analysis: ROCE measures the return earned on capital invested in business. This ratio takes into account the noncurrent liabilities and total equity for the two airline

companies. The higher the ROCE is, the better it is from investors' perspectives. Any change in ROCE results from either change in operating profit and revenue or in asset turnover or both. The ROCE of SAS in 2004 was -1% and this percentage jumped to 18,20% in 2006. As the general trend for all leverage ratios, it sharply fell in 2008 by 208% that the main reason was due to negative operating result. The capital employed of SAS in 2008 did not decrease much compared to previous year; however, earning before interest and tax of SAS in 2008 negatively fell to -19,60%. During that period, SAS was expanding capacity which led to a rise in operating expenses. Even though Finnair did not surpass the return on capital employed of SAS when it only reached 14.20% in early 2007, the global financial crisis affected less on Finnair with -8.4%, and it kept fluctuating negatively until 2012. In 2014, Finnair did not meet its expectation of maintaining EBIT 7.7% of its revenue, but it had to decrease unit costs and remained the relative operating EBIT margin growth that were 50% of ROCE and 50% of total shareholder returns.

5.2 Debt coverage ratios

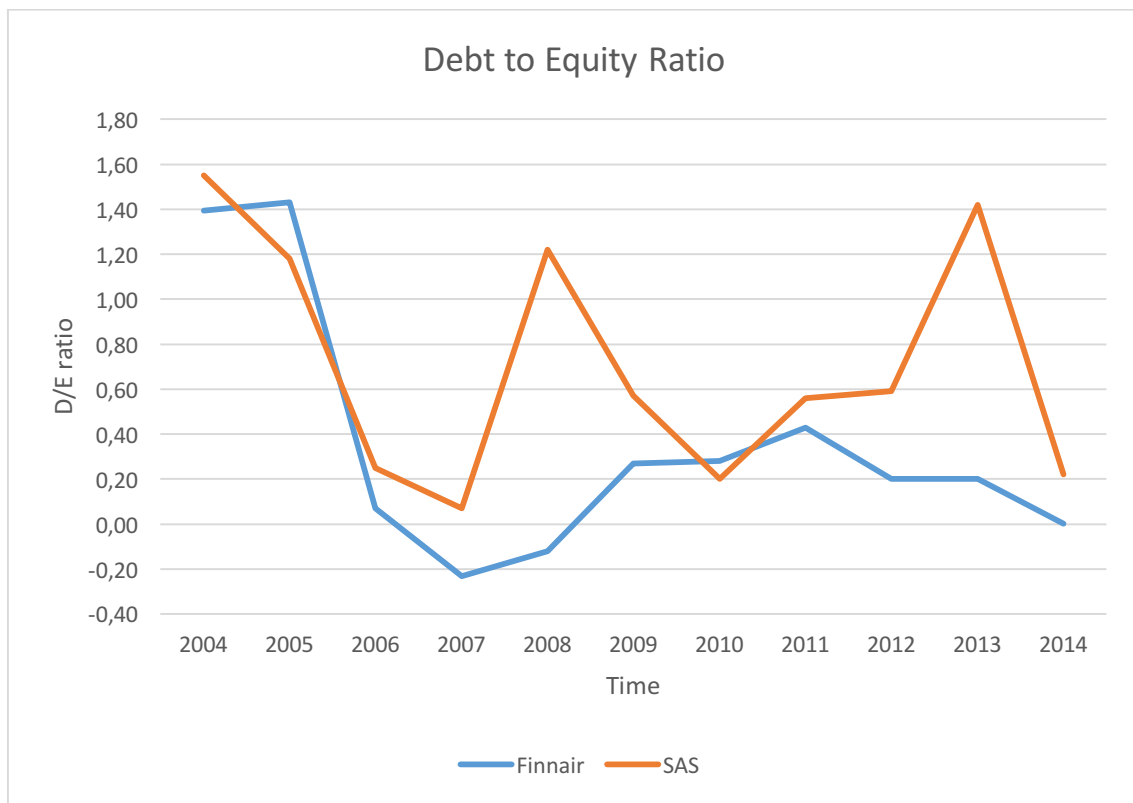


Figure 21. Debt to Equity Ratio between Finnair and SAS

The D/E ratio is used to evaluate the long-term solvency of a firm. In another meaning, it is one of the financial leverage tools to show what is the proportional distribution of liabilities and equity that company often uses to finance its assets. A debt ratio of 0.5 means that the assets of the company are funded 2-1 by investors to creditors.

Obviously, a high ratio can be seen as risky since investors have not funded the company's operations as much as creditors have. As can be seen in the debt-to-equity graph, SAS had remarkable fluctuation in D/E ratio from 2004 to 2014. After an increase in 2004 at the rate of 1.55, the trend was followed by a decrease in 2007 and after that, it rose up 1.22 at the beginning of 2009 before a sharp fall in 2010 by 83%. In addition, in 2012, SAS Group was exposed to the interest rate risk when its debt was remarkably affected by movements in market interest rates at different maturities.

Subsequently, D/E ratio started to go up again at the rate of 1.42 in 2013 and decreased by 84.5% in 2014. According to SAS strategy, it successfully improved its financial position by paying down its interest-bearing liabilities and as a result, the D/E ratio has improved by 95.4%. Total liabilities of SAS were mainly from interest-bearing and the increase in D/E ratio was due to weaker earnings in continuing and discontinued operations and higher working capital employed in 2008 and 2010. D/E ratio for Finnair airline in 2004 was approximately 1.4%, but it plummeted to -0.23% through optimizing capital structure. However, in the next four years, this ratio started to increase slightly and it tended to drop in early 2014 through continuously adjusted gearing. The average total debt to equity ratio of the airline industry in the fourth quarter of 2014 was 1.2. Consequently, Finnair made a better performance in term of financing its assets from funds by stakeholders and credits compared to SAS (CSIMarket 2015).

5.3 Market value ratios

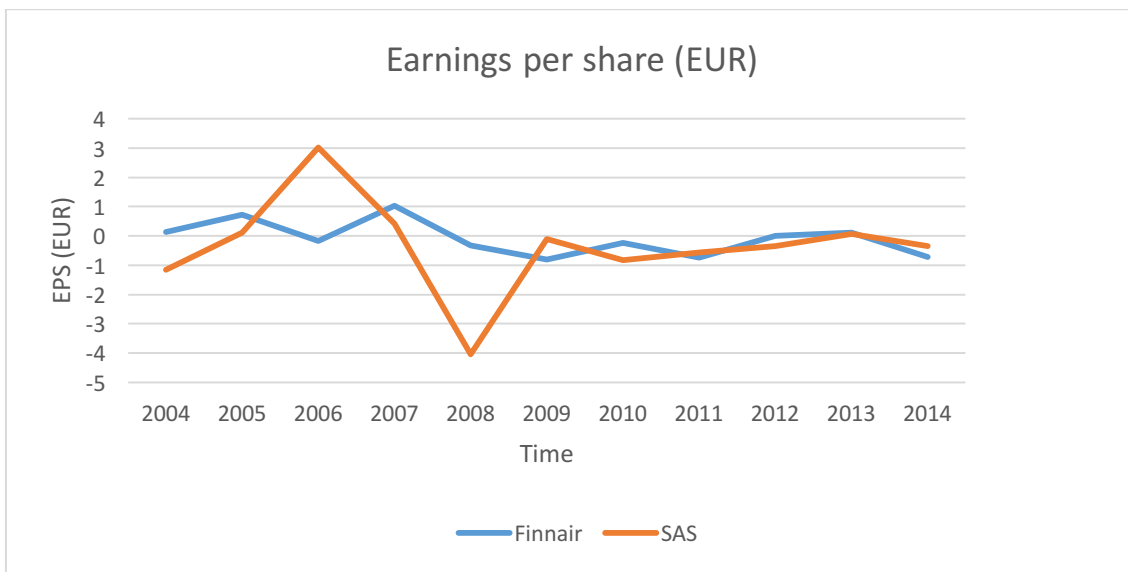


Figure 22. Earnings per share ratio between Finnair and SAS (EUR)

- **Earnings per share**

$$= \frac{\text{Net Income} - \text{Hybrid bond interest expenses net of tax}}{\text{Average outstanding shares during the financial year, adjusted for the share issue}}$$

Analysis: High earnings per share ratio means that company has the ability to pay a dividend for investors and invest in other activities based on the amount of money it earns from the market price of the stock. The EPS of Finnair dramatically fluctuated in the period of 10 years compared to that of SAS. The highest earnings were in 2007 which was approximately 1.04 EUR while in SAS were SEK 28.1 which was around EUR 3.04 (SEK/EUR= 0.1085 in April 2006) (see European Central Bank 2016). SAS's EPS remarkably lost its value by 236% into SEK -38.08 in 2008 (approximately -4.03 with SEK/EUR=0.106 in August 2008) (see European Central Bank 2016). Besides the reason of suffering from the global crisis, SAS had the discontinued operation of Spanair and that did impact on SAS's total earnings in 2008. After 2008, the EPS started to increase again and kept fluctuating negatively. The negative earnings per share mean that company is losing money, or it tells exactly how much money company is losing per share of outstanding stock. During the same period, Finnair suffered from losing its value when the EPS ratio decreased to EUR -0.33 in 2008 and EUR -0.81 in 2009. The earnings have been improved in next couple years and in 2014, it was EUR -0.71.

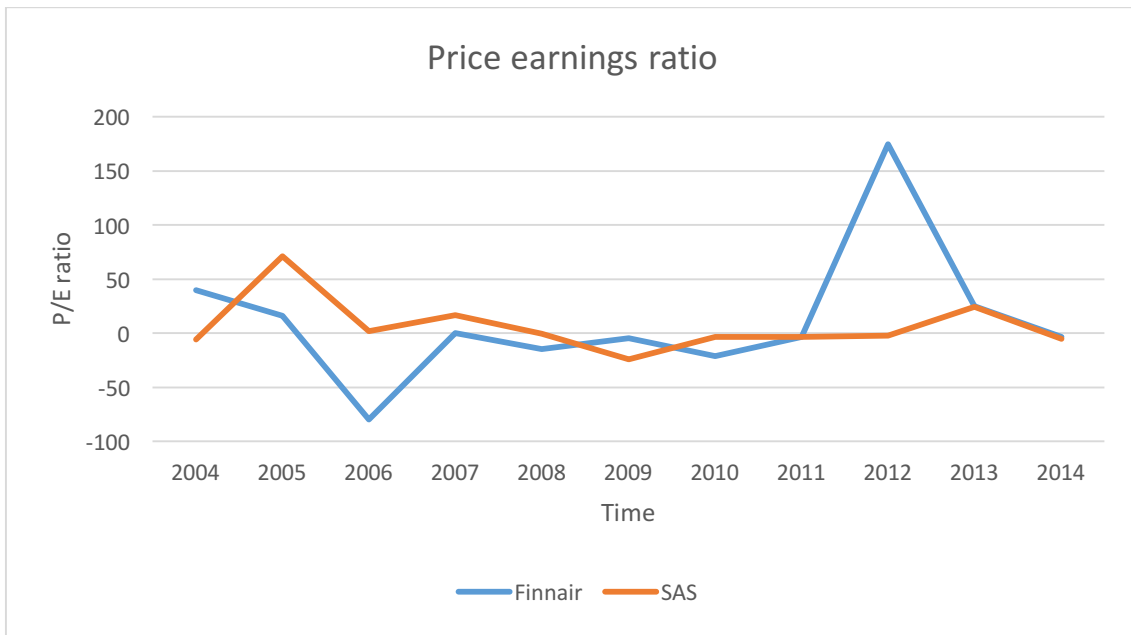


Figure 23. P/E ratio between Finnair and SAS

- **Price earnings ratio** = $\frac{\text{Market value per share}}{\text{Earnings per share}}$

Analysis: This ratio is a tool to measure the current share price with its per-share earnings and it is common for comparing different investments over different periods of time. High P/E ratio reflects that a company is growing faster, and their investors are willing to pay more per dollar since they expect that earnings from the company's growth will surpass that of other companies. As can be seen in Finnair's graph, the P/E went up and down from 2004 to 2011, and it suddenly rose up to 174.96 in 2012. That increase of P/E in 2012 was followed by a drop in the next two years. Most of the time during the 10-year period, Finnair's P/E negatively fluctuated. P/E ratio corresponds to the changes in either EPS ratio or share price which are the main factors drive the P/E. For SAS airline company, there was a high P/E in early 2005 and it started to fall in 2009 into -24.15 (SEK/EUR=0.1064 in June 2009) (see European Central Bank 2016). Negative P/E ratios mean a company with low P/E have low market cap value and higher debt, asset turnover, and stock liquidity. However, this also depends on the industry characteristics.

6 DISCUSSION

This research has been conducted to answer the research question: How profitable is Finnair as compared to SAS based on annual report analysis and financial ratios?

Initially, a review of three main financial ratios should be considered to give the most correct answer for this question. First and foremost, in the profitability ratios, based on the analysis carried out in this study, it was shown that Finnair and SAS had some similar movements in four-category ratios which were net profit margin, ROA, ROE, and ROCE. The results from net profit margin showed that Finnair and SAS improved the values of profitability ratio in 2006 and 2007 due to some positive visions during that time. However, the two airlines company did bad performances in 2008, and one of the main reason was due to the global crisis that led to the dramatic decrease in air traffic passenger and freights. There was a discontinue of operation in SAS, together with the tragic accident affecting Spanair that made SAS's revenue strongly decreased in 2008. Based on primary data retrieved through secondary research on profitability ratios, two airlines companies had difficult time to remain profitable over its operations. The net profit margin of two companies remained negative from 6 to 7 years during their 10-year period in operation. That might draw investors and other stakeholders' attention since they could see many losses that their companies were experiencing; obviously, they were likely not to be favor of them. However, according to the leading airline trade group, the airline industry was not quite where it wanted to be; while U.S airlines made the profit for 21 cents for each passenger it carried (Ted Reed 2013). The profit margin of the whole airline industry was less than 1% on average even though airline companies did improve their incredible growth. The airline industry made profits of USD 4 for every passenger carried according to a statistic in 2012 (The Economist 2014). Differences in margins ratio for companies in the same industry present different insight into each industry and capital, cost allocation practically. Therefore, it can be concluded that Finnair was in a more solid position compared to SAS since it maintained a more favorable profit margin during a 10-year period.

The same trend happened to ROE and ROA to both companies. All components used to calculate ROA and ROE could reflect well the main components in the financial statement of a certain business. According to what was provided in the literature, a low

ROE was generally a signal that the firm was in a weak situation and it showed the firm's limitation to the new capital since it discouraged investors from investing (Eisemann 1997 pp. 51-57). Finnair and SAS airlines almost had negative ROE and ROA after the period after 2008, while SAS suffered more in 2008 due to currency exposure loss and a lot of operating expenses compared to Finnair. It is noticeable that those two ratios improved as a result of recovery from the global crisis in 2008 but still remained negatively. There is a tight correlation between those profitability ratios with the air passenger demand trend which was mentioned in the overview part of the airline industry. After keeping increasing their capacity to meet the growing demand for air transportation which surged into 8% in 2010 in above graph, both companies gradually experience a slight increase until at the end of 2012. This did not happen to only Finnair and SAS, but it also happened to all of the airlines all over the world due to the same financial losses from decline in demand and increased operating expenses which were driven by soaring fuel price costs and labor costs.

The ROCE, according to PwC analysis of the importance of ROCE (2013), the airline industry is by poor nature compounders of capital over long term period because of certain intrinsic characteristics such as wafer-thin margins, and inability to pass on cost increases to customers among the others. Therefore, as a result, it is common to see companies operating in low ROCE in such a capital-intensive business like the aviation. Finnair and SAS had positive ROCE from 2004 to 2008 even though those ratios slightly fluctuated; however, those ratios drastically dropped in 2008 and 2009 due to the mentioned reason. The below graph shows average ROCE and WACC for 69 public listed airlines worldwide.

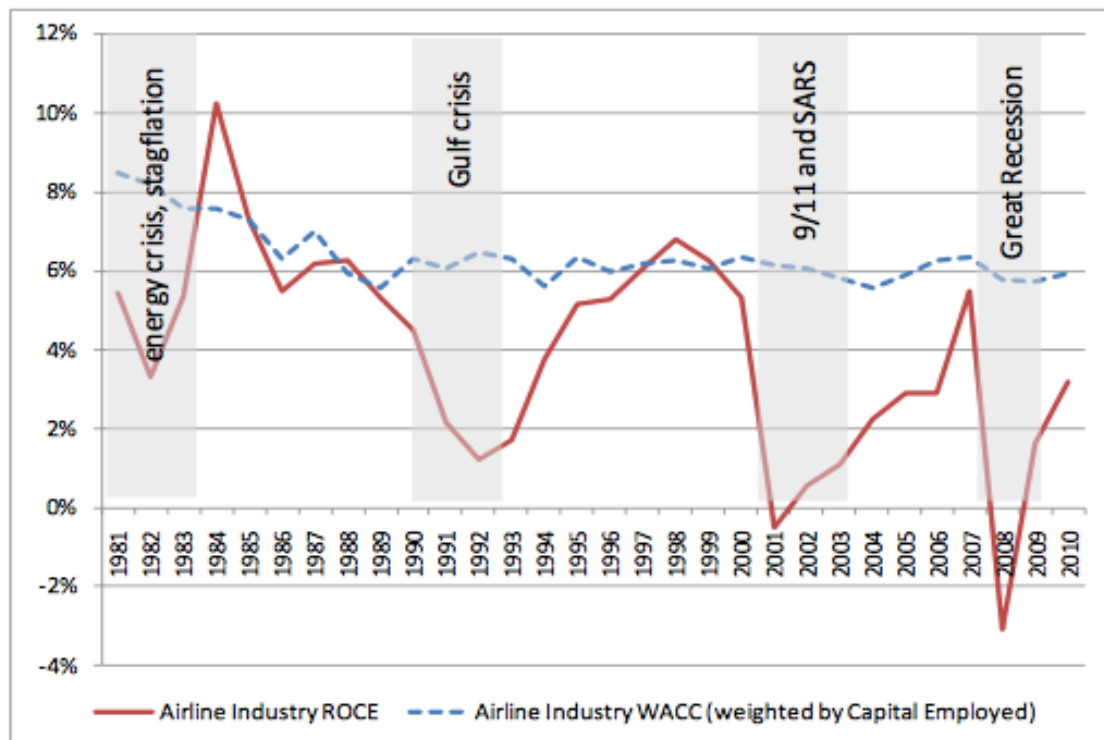


Figure 24. Airline profitability (Source: Thomson Financial)

According to the graph, the movement of ROCE corresponds to that of Finnair and SAS which means that other airline companies in the same aviation industry should experience the same ratio of ROCE. They had good performances in earning before interest and tax that take into account the noncurrent liabilities and total equity from 2004 to 2007. In 2008, all of them suffered from a dramatic drop in price and passenger demand that led to a great loss during that time. However, both Scandinavian airline companies still maintained their ROCE negatively until approximately 2012, while the average ROCE of other airlines exceeded 0% after 2008. As stated in early part of this research, the ROIC rate increased to 8.3% in 2015 and it is the first time in aviation industry creating value for equity investors. Based on this ratio, it is predicted that the airline industry will keep positively returning to its investors due to the drastic decrease in the price of fuel cost.

In profitability ratios, although Finnair did not surpass SAS in some periods around 2006 in making a profit and getting a high return, it still resisted well from being affected by the adverse effect on their business. Finnair had a better performance in maintaining profitable compared to its biggest competitor.

The D/E ratio is known as the measure of risk since more debt used, the business is likely to liquidate and go out of business (Lewis 1993 pp.13). D/E ratio remarkably fluctuated during a 10-year period, and it surged into 1.2 and 1.4 in 2008 and 2013 in SAS. On the other hand, being at the high rate of 1.4 in 2005, D/E ratio negatively went to -0.2 in next couple years and it stayed low until 2014. Investors tend to be in favor of low D/E ratio since it indicates that business has a low level of debt compared to invested capital which is financed from their money. Finnair's objective was to support business operations by ensuring normal operating conditions and increase the shareholder value with the best return as a reward (Finnair Annual Report 2014). Finnair had a good performance in remaining the low D/E ratio according to its policy. Moreover, in order to make sure that company would not be subject to too much debt, it has been trying to adjust the level of dividend paid to shareholders or decide on sales of asset items in order to reduce debt. In contrast, due to weak earnings in continuing SAS's business, discontinued operations, and higher working capital employed, SAS seemed to experience unstable and high D/E. Overall, Finnair had the better debt coverage ratio compared to SAS.

The EPS relatively goes with the earnings. A low EPS does not mean that investors are paying loss the company, but low EPS decreased a net loss for the value of the business in which shareholders suffer from losing the value of their stocks. This ratio has been calculated based on a consistent basis by the company over years. According to what is mentioned in the literature review, there is a strong relation between stock prices and earnings (Atiase 1986). The price of Finnair stock in 2007 which reached the highest value was nearly EUR 14.35 and it dropped to 3.5 in 2008 that corresponded to the movement of EPS rate. After converting EPS in SEK to EUR, the highest value of the EPS of SAS was EUR 3.04 in 2006 and the lowest value was EUR -4.03 in 2008 during the great recession. Generally, the EPS of Finnair experienced positive value until the recession in 2008 and the earnings remained negatively after that period. The same situation happened with SAS during the same time; and in 2013, both earnings from two airlines went positively. Normally, there is a significant positive relationship between dividends and EPS; nonetheless, Finnair and SAS have decided to invest back to their business instead of paying back the dividend. Those investors have believed that instead of receiving the dividend as rewards after each period, it is also a good way to reinvest back to companies' business since their shares keep increasing value if

companies are doing good. Literally, Finnair and SAS were in the same situation for the EPS.

The last ratio of market ratios is P/E which is used to compare company's current share price to its EPS. According to U.S Global ETFs (2015), a favorable P/E ratio is normally ranged from 10 to 17 that is considered to be a fair trade. A rate below 10 might mean that the stock is undervalued or its earnings might be above historic trends. A company with high P/E ratio is likely to be in favor of investing or buying from investors' perspectives. This ratio in the airline industry is expected to be around 8.07 in 2016 (U.S Global ETFs 2015). According to what was stated in the literature review, P/E ratio based on historical earnings was safer for the company compared to that taken from predicted earnings (see M. K. Pratt 2001). From 2004 to 2011, P/E ratio of Finnair airline decreased over time and one of the most noticeable drops was in 2006. The reason for that drop was not from the lost value of stock price; it was due to the negative EPS in 2006 compared to previous years. However, the P/E ratio was improved to 174,96 due to a sudden increase in 2012 and early 2013. The reason behind the increase or decrease of P/E could be the expectation of investors since it could drive up or down the price of stock. Compared to Finnair, SAS trend was quite stable except a high P/E in 2005. In 2014, both P/E ratio of the two airline companies tended to decrease subsequently. Practically, compared to what has been discussed in the theory part, investors are likely to look at historical earnings when they make a decision whether to invest in such a capital-intensive business like the airline industry. One of the reason is that this industry is different from others since it requires large capital, and operating expenses; moreover, the airline companies practically have to suffer from loss much more than other industries. Therefore, investors evaluating company with the P/E ratio should base on the historical data to know how well a company generates its earnings during a long period of operation and that ratio of other competitors. Other useful characteristics of P/E can be found when comparing the profit margin and revenue. Evaluating company's performance based on P/E ratio is much more meaningful than based on price/sales (P/S) ratio since P/S does not take the profit margins into accounts. Investors practically want their companies to have high long-term earnings, not long-term revenue and P/E ratio is fundamentally calculated based on revenue and profit margin, or earnings in another term. The airline industry has been mainly effected by fuel price in financial operations, and the increase or decrease of fuel price obviously

impacts on the airline earning rather than the airline revenue. It can be inferred that P/E ratio is useful for evaluating airline company's performance. The cost of fuel has remarkably decreased since September in 2015 compared to some previous years that strongly benefit airlines earnings during that time. From the market ratios of the two airline companies, investors are likely to invest in Finnair rather than SAS since based on what has been analyzed, the Finnish nation-flag carrier's growth projection is clearly higher.

Fundamentally, the main question in this research is answered through what has been analyzed above. Based on profitability ratios, debt coverage ratios, and market ratios, investors are likely to invest in Finnair since it has been building a solid platform to grow more in future as compared to SAS. Being "national-flag" carriers, even though Finnair had to suffer from losses in profit and got a subsidy from the state, it was still considered as an important strategic business that was supported from Finnish government by the monopoly powers. However, SAS is trying to expand further in the future, and Asian is one of the most potential markets for two companies to compete, SAS still needs an innovative solution to optimize its business operations.

Based on what has been analyzed about airline industry's ratios, financial ratios also give a broad picture of characteristics of this particular business. Whatever kinds of business each airline is trying to pursue, such as LLC or FSNCs, it requires large sums of capital in order to operate efficiently. Moreover, it requires a high cash flow in order to repay debt and acquire new aircraft since this industry seems to suffer from depreciation in its equipment and planes' value over time. Aviation's earnings generally depend on operating expenses and seasonal sales. It is also effected by other economic changes which were mentioned in the beginning of this research, and in this such a vulnerable business like the airline industry, only small changes in those factors can dramatically influence on airlines' business.

As the passenger demand has been increased since the great recession in 2008 and the net profit of commercial airlines worldwide is positively increasing, the airline industry is facing some positive changes in recent years. Moreover, some airlines are now trying to join the team alliance in order to benefit each other based on the agreement of air traffic. Not only do they take advantage of operating cost based on the code-share

program, but also they benefit from increased demand of air passenger due to the availability and simplicity. The graph below shows the record profits for the airline industry as a whole and as can be seen, this industry is growing profitably due to drop in fuel price.

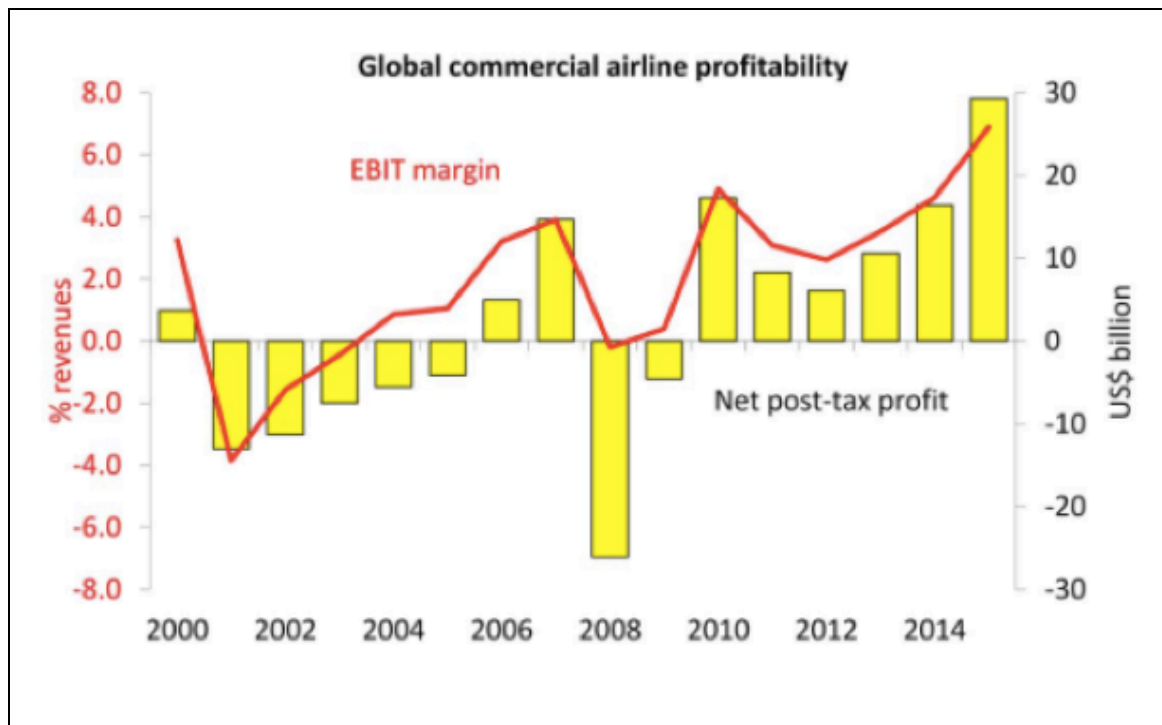


Figure 25. Global commercial airline profitability (2000-2014) (Source: ICAO, IATA)

The original of ratio analysis was explored long time ago, but the adoptions of ratios as a tool for financial statement analysis has been developed recently. The demand for ratios analysis from financial statements corresponds with the rise of enterprises in various industrial sectors (James, O.H 1968 pp. 284-294). There have been a lot of financial ratios analysis and ratio comparisons in the airline industry and other industries. Through analyzing the data for a 10-year period and some other researches in the airline industry, this capital-intensive business does not seem to be stably develop and gain much profit as compared to other businesses. Moreover, there are a lot of competitions as LLCs are increasing and there are not so many barriers for them to access in this industry, many large airlines are facing a lot of difficulties to earn the profit with large operating expenses. The picture of the impact of the global crisis in 2008 was clearly depicted at the beginning of this thesis as an important part that could motivate other findings to explore more about how dramatic it effected on the airline industry or other industries. Even though each industry is likely to be analyzed under

certain ratios, other findings related to other industries can take this as a reference to choose which ratios they should go deeper. This thesis focused on comparing the two airline companies and in each part of analysis, there were some comparisons between their ratios and an average ratio of whole industry; similarly, there should be some improvements between comparing one company's financial ratios with average ratio in order to gain a broader picture of the whole industry.

7 SUMMARY AND CONCLUSION

The summary and conclusion part comprises a summary or main findings, and it is directly connected to the main purpose of this research.

The thesis is based on the analysis of financial ratios which comprise three main ratios: Profitability ratios including net profit margin, ROA, ROE; Debt coverage ratios including D/E; Market ratios including EPS and P/E. The analysis was conducted based on the data retrieved Finnair and SAS. The main objective of the thesis was to use financial ratios in a 10-year period to evaluate both airline companies' performance and it was achieved by analyzing financial operations of those. This research can be a reference for some findings focusing on analyzing financial ratios, which concentrate on other industries. Furthermore, from the airline industry perspectives, there are other researches on comparing some LCCs, or some case studies of leading American carriers that have similar analysis. The further objective can be obtained by giving information to general investors who have not had adequate knowledge in the airline industry to gain an insight when considering for their investments in the Nordic airline market area.

As mentioned, the selection of the two airline companies was an example of showing how two companies in the same industry can be compared with each other. The airline industry practically involved in large sums of money in maintaining airplanes, maintenance services, ground handling and other expensive equipment; and it is easy to be effected by other changes in other industries as well. Some of the main determinants of the airline revenue are operating expenses, cargo services and demand of passengers in which small changes can dramatically influence on the airline business. An overview of this industry was initially presented in order to present some correlations between events effecting on the airline industry and fluctuations of ratios of individual company.

Substantially, the fluctuations of each company's ratios can be dependent on each characteristic of the whole industry since this industry especially requires an enormous range of capital. The reason and impact of each individual component of companies' financial statement were revealed in the analysis part.

In conclusion, the results might indicate that both airline companies are likely to face debt, profitability issues in the short run as they are easily influenced by adverse business and other financial and economic conditions during the 10-year period. Financial ratios are one of the widely used and most useful to assess company's performance; however, there are still a lot of crucial factors that effect on the airline companies. They can be either some factors mentioned in the early part of this thesis such as disease, terrorist attacks, fluctuations in fuel price, or some changes in technology, global economy or competition. A manager from companies should take into account all of these factors to make right decisions; however, investors and other creditors are likely to look at those financial ratios to decide whether to take a risk with their capital investments.

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APPENDICES

This appendix consists of table used in this thesis for calculating all financial ratios, in the order to appearance in the main text.

Table 2. Profitability ratios of Finnair and SAS

Profitability Ratios		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Net profit margin (%)	Finnair	0.69	3.31	-0.65	4.68	-1.85	-5.54	-1.13	-3.88	0.48	0.46	-3.61
	SAS	-3.04	0.41	7.80	1.22	-11.88	-6.56	-5.45	-4.07	-2.74	0.42	-1.89
Return on assets (%)	Finnair	0.82	3.95	-0.79	5.36	-1.98	-4.50	-0.94	-3.67	0.51	0.50	-4.04
	SAS	-2.97	0.44	8.16	1.27	-13.72	-6.86	-5.26	-4.16	-2.59	0.49	-2.56
Return on equity (%)	Finnair	1.91	9.20	-2.16	10.34	-5.41	-11.94	-2.67	-11.63	1.50	3.2	-13.80
	SAS	-15.98	2.11	28.92	3.71	-72.81	-25.88	-15.36	-13.57	-8.83	1.61	-14.65
Return on capital employed(%)	Finnair	3.70	11.10	-0.10	14.20	-2.50	-8.40	-0.40	-5.20	2.80	2.30	-6.50
	SAS	-1.10	5.00	18.20	6.70	-19.60	-11.70	-7.60	-2.20	-8.10	6.70	1.60

Table 3. Debt coverage ratios of Finnair and SAS

Debt coverage ratios		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Debt-to-equity ratio	Finnair	0.00	0.20	0.20	0.43	0.28	0.27	-0.12	-0.23	0.07	1.43	1.39
	SAS	0.22	1.42	0.59	0.56	0.20	0.57	1.22	0.07	0.25	1.18	1.55

Table 4. Market value ratios of Finnair and SAS

Market value ratios		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Earnings per share	Finnair	0.14	0.73	-0.16	1.04	-0.33	-0.81	-0.24	-0.75	0.01	0.11	-0.71
	SAS	-10.70	1.06	28.10	3.87	-38.08	-1.19	-8.03	-5.13	-2.99	0.54	-3.03
Price earnings ratio	Finnair	39.81	16.43	-79.91	7.79	-14.82	-4.61	-21.09	-3.07	174.96	25.02	-3.49
	SAS	-5.70	71.30	1.70	17.00	-0.60	-24.15	-3.22	-3.15	-2.38	24.64	-4.80