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How industry change has affected European airlines

Development of profitability and capital structure
year 2000 - 2008



Bachelor thesis within Business Administration

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.....

Anna Helander

.....

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Fasten your seat belts and hold on tight, we're taking off...

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Abstract

Background: The airline industry of today functions in a very intense and competitive market and is also very sensitive to change. Over the last years the airline industry has changed and been affected drastically. Factors like sudden shocks, such as the terrorist attacks of September 11th in 2001 and the SARS (Severe Acute Respiratory Syndrome) phenomenon in China 2003, change in macroeconomic factors, such as GDP growth in different regions, changes in the oil price and fluctuations in exchange rates, and also by the fact that the airline industry have experienced a general change in structure and trends. A consequence of these shocks and general industry changes, also made worse by the ongoing financial crisis and escalation of fuel price many airlines have lost a significant part of their market value. The fact that during a normal year around eight airlines in the world go bankrupt but that Sterling became the 31st in 2008 strengthens this statement.

Problem: All these incidents the airline industry has been exposed to, combined with the overall industry change in structure and trends, have given the European airline industry the shape that it has today, and the change is not over. This emphasizes the importance and interest to map out the airline industry of today with the most recent and major events in consideration and also the curiosity for the fact that differences in how the different airlines have been affected should exist.

Purpose: The purpose of this thesis is to investigate how industry change has affected the profitability and capital structure of European airlines, individually and in comparison with each other.

Method: Six actors in the airline industry were selected for a descriptive type of study that takes a deductive approach. Secondary numerical data from the airlines' annual reports was used and analyzed and conclusions were drawn based on existing theories. Quantitative calculations for different financial ratios were made. To get analysts' viewpoints and more depth and detailed description of the topic, a qualitative approach was used in the form of interviews. For a more structured analysis and to easier evaluate the development of the financial situation of the airlines an observational scheme was developed.

Conclusions: For the three financial aspects studied, significant patterns were observed that could be explained by the shocks and trends that have changed the European airline industry. The strongest empirical findings indicating affects of this kind was for the levels of profitability, both for traditional airlines and Low Cost Carriers. The shocks of September 11th and SARS, with their respective consequences and aftermaths, were reflected in the findings and also the effects of the general industry trend of an increase in competition.

Definitions and abbreviations

AEA – The Association of European Airlines, made up by 35 major airlines, and has represented the European airline industry for more than 50 years. Based on broad knowledge of the industry and extensive networks, AEA is an important platform for industry. AEA is relied upon by policy-makers and the media as a reliable contributor to debates and the organization works in partnership with the institutions of the European Union and other stakeholders in the value chain, to ensure the sustainable growth of the European airline industry in a global context (AEA: About us, 2008). All airlines in this thesis but LCCs Ryanair and EasyJet are members of AEA.

Airline industry – in this thesis used interchangeably with aviation industry and air transport industry. All refer to the commercial transportation by air performed by scheduled and chartered airlines. However, the focus of this study is on scheduled airlines.

ASK – Available Seat Kilometers (see section 2.4.2.1).

BA – British Airways (see section 4.1.1).

IATA - International Air Transport Association, an international trade body, created in 1945 by a group of 57 airlines. Today, IATA represents some 230 airlines (78 in the European region), in 126 different countries, comprising 93% of scheduled international air traffic. The organization also represents, leads and serves the airline industry in general (IATA: About us, 2008). All airlines in this thesis, except LCCs Ryanair and EasyJet, are members of IATA.

ICAO – International Civil Aviation Organizations, a specialized agency of the UN (United Nations) which has at present a membership of 190 states. These are required to report certain statistics to ICAO as specified by the ICAO Council. The major parts of the statistics are submitted on established forms annually or at other fixed reporting periods (ICAO: About ICAO, 2008). All states relevant in this thesis are member states of ICAO.

Industry change: industry change, in this thesis, refers to the change in the airlines' external environment caused by: alterations in general industry trends such as level of competition and customer preferences; changes in macroeconomic factors such as GDP growth and fluctuations in exchange rates; and sudden shocks such as the terrorist attacks of September 11th in 2001 and the SARS phenomenon.

LCC – Low Cost Carrier (also known as low fare airline, no-frills airline, etc.). This is a relatively new type of airline, introduced to the European market by Ryanair in 1991. The strategy of a LCC differs from a traditional airline in several ways, but mainly in that the level of service is lower, offered fares are lower, usually it uses secondary airports, it flies point-to-point and operate one single type of aircraft (Luftfartsstyrelsen: Flygtendenser 02/2008, 2008). LCCs included under study in this thesis are, Ryanair and EasyJet

PLF – Passenger Load Factor (see section 2.4.2.5).

RPK – Revenue Passenger Kilometer (see section 2.4.2.3).

Traditional airline – all other scheduled airlines not applying a typical LCC strategy (see LCC above). Also referred to as network airlines and full-service airlines (AEA: Yearbook 2004).

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1 Introduction

This chapter will introduce the thesis by presenting the background and the problem of the chosen topic. Relevant research questions will be stated and also the purpose of the thesis. A presentation of the selections and delimitations made and what perspective that was taken will also be presented in this chapter.

1.1 Background

"We are in the worst trading environment the industry has ever seen", said Mr. Walsh [CEO, British Airways]. "We have already seen 30 or so airlines go bust this year and it would be fair to expect a similar number of casualties worldwide over the next three to four months." (Hickman & Prosser, 2008).

The invention of the airplane is one of few inventions that have changed how people live and experience the world. The techniques for the planes' design and construction were immensely improved due to government subsidies and demands for new airplanes during the World Wars (Investopedia, 2008).

The first commercial airplane routes were established in Europe after World War II. Air travel is today so common that a life without it is hard to imagine. It is not only the airline industry that has evolved but also the way people live and do business (Investopedia, 2008).

Today the airline industry operates in a very intense and competitive market. In earlier days the airline industry was partially government owned, but since the deregulation of the markets (in the 1970s in the US and starting in the late 1980s in Europe) the industry has become more privately held (Investopedia, 2008).

In the beginning of 1990s the concept of LCC (Low Cost Carrier) was introduced in Europe. The numbers of LCCs have increased massively during the last 10-15 years and 2007 was a record years for the LCCs, with over half a billion passengers in total. The LCCs represent more than 20 % of the world market and almost 40 % on the European market (Luftfartsstyrelsen: Flygtendenser 02/2008, 2008).

During a normal year around eight airlines in the world go bankrupted, but Sterling became the 31st that went bankrupted during 2008 (Bergfelt, 2008). A combination of the high fuel price, which peaked in July 2008, and the current recession that is affecting the world today are two of the main reasons for the crisis in the airline industry. The crisis has greatly affected the industry and forced many airlines to major cut-backs in airplanes, workforces and routes. Some airlines have had to reorganize and some have, as mentioned, gone bankrupted. The situation today has been said to be the worst crisis in the history of the airline industry (Östlund, 2008).

The European airline industry has changed and been affected drastically over the last years. This industry change is not only a consequence of factors such as sudden shocks, as the terrorist attacks of September 11th in 2001 and the SARS (Severe Acute Respiratory Syndrome) phenomenon in China 2003, but also by changes in macroeconomic factors, such as GDP growth in different regions, oil price and fluctuation in exchange rates, and by the fact that the airline industry have experienced a general change in structure and trends.

A result of the industry change, and also made worse by the ongoing financial crisis, many airlines have lost a significant part of their market value. Most likely, at least a part of these companies will manage to adjust to the structural changes of the industry and see their market value once again increase (IATA: Airlines Financial Health Monitor, 2008).

1.2 Problem and research questions

As discussed in the background the airline industry has been exposed to many events during the last years such as the terrorist attacks of September 11th, SARS, and the most recent event of a sharp rise in the price of crude oil that caused the escalation of fuel price. All these shocks, combined with the overall change in industry structure and trends and changes in macroeconomic factors, have given the European airline industry the shape that it has today.

This emphasizes the importance and interest to map out the airline industry of today with the most recent and major events in consideration.

Differences in how the European airlines have been affected should exist. It is therefore interesting to investigate how different European airlines have been affected by the recent years industry change and how this differs between the airlines. An event such as a rapid increase in fuel price is something that demands fast acting from a company's side. However preparation and acting before this can vary between the companies, which, in turn, should be expected to appear in actual levels of profitability and capital structure.

Since LCCs' and traditional airlines' strategies are very different (see section 2.2.2), one would assume that also their capital structure and pattern of profitability differs. Therefore it is interesting to take into consideration the differences between the LCCs and the traditional airlines in the context of how industry change has affected European airlines.

Thus, the previous discussion leads to the following research questions:

- How has the level of profitability, liquidity and indebtedness of the different airlines developed 2000-2008, and how does this reflect the industry change?
- Can a pattern of change in ratio levels be observed *within the individual airline* looking at data for 2000-2008?
- Can a pattern of change in ratio levels be observed *between the different airlines* looking at data for 2000-2008?
- What do analysts say about today's crisis and what do they predict for the near future?

1.3 Purpose

The purpose of this thesis is to investigate how industry change has affected the profitability and capital structure of European airlines, individually and in comparison with each other.

1.4 Selections and delimitations

Due to finite data access for other geographical areas, this thesis was focused on the European airline industry. Still, European carriers covered the largest market share of international traffic in 2007. If including domestic traffic, the European was second after the North American carriers (ICAO, 2008). Thus, the European airline industry was for this study considered to be of more than significant size and interest to investigate. Today the European airline industry consists of about 500 airlines (Luftfartsstyrelsen: Flygtendenser 02/2008, 2008). However, the number of comparable airlines with annual report data available to the public was not sufficient for conducting a statistically reliable study. For this reason, six actors in the industry were selected for a descriptive type of study. This thesis focuses on the study of six of the *major* European airlines. The larger corporations generally equal larger market shares which in turn meant a result more representative of the market as a whole. Furthermore, the small actors often have a more niched strategy, making it harder to compare them to others. Another advantage with the large airlines was easily available information. Selection was primarily based on size, with the aim of achieving a geographical spread within the European industry, and also based on the comparability between the airlines. Today the airline industry can roughly be divided into three types of airlines; LCCs, traditional airlines and charter carriers. The last type almost exclusively devotes their operations to chartered traffic, i.e. not scheduled traffic.

Four of the chosen actors for this study were so called traditional airlines (see Definitions and abbreviations). These were chosen since they constitute four of the industry's largest, and thus most important, traditional airlines, in terms of both turnover and RPK flown. The other two chosen actors were the largest actors of the LCC segment of the industry (AEA: Yearbook 2007), a segment of increasing importance (see section 2.2.2). The chosen airlines were;

Airlines	Type of airline	Headquarters based
- British Airways	traditional	UK
- Finnair	traditional	Finland
- Iberia	traditional	Spain
- Lufthansa	traditional	Germany
- Easy Jet	LCC	UK
- Ryanair	LCC	Ireland

An observational scheme was developed and used for analyzing the chosen airlines (see section 3.6). This scheme covers, in a structured way, financial aspects, industry specific aspects and the development of financial ratios.

All numerical data used in the analysis were based on the firms' annual reports from fiscal year 2000 to 2007/08 and interim reports from the two last years of the same period.

The thesis focused mainly on passenger traffic, both business- and leisure travelling. However, one should also be aware of the use of air transportation as a mean of transporting cargo and mail, which different airlines devote different amount of their activities to. This was taken into consideration when analyzing the chosen airlines.

1.5 Perspective

The perspective of this thesis, since using only publicly available information, was taken from an external party's point of view. Furthermore the thesis, although discussing events that occurred all over the world that were of importance for the *entire* airline industry, these events were analyzed from the perspective of the *European* airline industry.

2 Frame of reference

This chapter starts by giving an industry overview followed by a discussion of the industry change and Porter's five forces. Ratio analysis in general and the chosen ratios for this thesis will also be presented. This frame of reference was used to delimitate the study and to later analyze the empirical findings.

2.1 Industry overview

To not overwhelm the reader with historical information about the airline industry, this industry introduction will be brief and focus, as the thesis, on the European industry.

2.1.1 Deregulation of the European airline industry

Extensive government intervention and control characterized the air transport industry in Europe before the mid 1980s. The state was in possession of all of the major airlines in Europe and national regulatory authorities had the responsibility to assess suggested changes in fares and to supervise capacity and entry. They also had the task to consider the financial health of existing or prospective airlines. Pricing and capacity set by bilateral agreements between the involved governments determined the nature of air services between countries in Europe. The typical trends were dominance of routes by state-owned flag carriers and revenue sharing. To understand this regime one must know that it reflected the worldwide long-established perception that traffic rights were valuable national assets. These could be traded for equal traffic rights or even other rights. The perception was embowered in the 1944 Chicago Convention, which recognised each state's exclusive sovereignty over its airspace. Under the Treaty of Rome, signed in 1957 by the members of the European Union, air transport between the member states was given special treatment since it was specifically excluded from the general provisions of transport policy. Until 1986 there was even uncertainty about whether the Treaty's competition provisions applied to the industry (Johnson, 2003).

The regulatory environment in Europe today is nothing like that of the mid 1980s. The development towards a deregulated industry was initiated as a number of countries adopted a more liberal approach to their own domestic air transport system, e.g. in the UK in 1982 when the government started to permit competition on the important Anglo-Scottish routes out of Heathrow. To achieve a more relaxed regulatory framework some of the agreements between EU countries were also altered. Those between the UK and the Netherlands, Germany, Belgium, Luxembourg and Italy were all liberalized between 1985 and 1988. Starting in 1987, EU-level air transport policy was implemented in three stages and reached completion in 1997. Although the regime in Europe is now very alike that in the US, the approach on how to get there was much more evolutionary in contrasts with the concentrated change that occurred at the end of the 1970s in the US. There are now basically no restrictions on entry, fares or frequencies on intra-EU routes. However, bilateral agreements still characterize air transport between EU and non-EU destinations. Concurrent with these developments, there has been a complete or partial privatization of a number of state-owned airlines in Europe. However, the public ownership element is still substantial in many European airlines (Johnson, 2003).

Table 1. Scheduled services by region of airline registration in 2007 (ICAO Contracting states) (ICAO, 2008).

	International Passenger-kms performed (% of total)	Total Passenger-kms performed (% of total)
Europe	40,20%	27,60%
North America	17,20%	33,80%
Asia and Pacific	27,30%	26,80%
Africa, Latin America & Caribbean, Middle East	15,30%	11,80%
Total	100%	100%

Some idea of the relative overall scale of the European scheduled air transport industry 2007 may be obtained from Table 1. Europe was one of the three largest regions, in terms of scheduled passenger kilometers by region of airline registration. European registered airlines are superior when not considering domestic passenger kilometers. In the information in the table clearly reflect the significant size of the domestic markets in North America; for total passenger kilometers North America is the largest region but when only accounting for international passenger kilometers the region is significantly smaller than that of Europe and Asia and Pacific (ICAO, 2008).

2.1.2 Important events and changes in relevant macroeconomic factors 2000 – 2008

The information in this section mostly applies to the traditional airlines. However, the changes in macroeconomic factors such as the price of crude oil and global economic growth most likely affected the LCCs as well.

2000:

2000 was a year in which demand was strong but still many of the AEA member airlines struggled to break-even.

This was largely due to the fact that the US Dollar exchange rate, relative to the Euro and other European currencies, appreciated significantly in parallel with an increase in fuel price (see Appendix 1). Since airlines normally purchase their fuel in US Dollars, the appreciation worsened the impact of increased fuel prices (AEA: Yearbook 2001).

2001:

Already through the summer of 2001 the industry was in a bad state especially in the North Atlantic market. However, after the tragic events of September 11th, the final quarter was a financial disaster and the industry as a whole experienced its worst loss ever. The airline industry was hit from several sides by the terrorist attacks and suffered substantial damage (AEA: Yearbook 2002).

A dramatic drop in demand followed and in the last four months of 2001 massive traffic losses were recorded. The immediate effect on traffic was comparable to the aftermath of the Gulf War in 1991 but the following depression was much more drawn out this time (AEA: Yearbook 2002).

The North Atlantic market experienced the largest loss in traffic, with significant decreases continuing through 2002. But all areas in which AEA carriers operate, except the Mid Atlantic route group, suffered major decreases in traffic following the terrorist attacks. The traffic trend for Far Eastern routes, which had been weak already earlier in the year, dropped significantly as well. In the last four months of the year, intra-European traffic of the AEA carriers decreased by 11.6% compared to the same period of 2000 (AEA: Yearbook 2002).

A number of airlines had to stop their operations and surviving airlines made major capacity cuts, which in all meant that many thousands of jobs was lost also in the industries that serve the airlines (AEA: Yearbook 2002).

As one would have thought, security was also massively increased after what happened. The enhancements included both, for the customers, 'visible' security enhancement at airports, e.g. through much stricter and more time-consuming checks and inspections, as well as other developments less observable. All of the AEA fleet's aircraft was equipped with armoured cockpit doors and most airlines implemented intensive programmes of staff screening, security awareness training, and better surveillance of sensitive areas (AEA: Yearbook 2004). As an immediate result of the September 11th attacks, the airlines dramatically changed the way they insured themselves. They were expected to cover this new risk, while at the same time regular premiums increased substantially (AEA: Yearbook 2002).

2002:

The global economic slowdown of 2001 continued in 2002. The previous year's downturn in the US economy was followed in 2002 by a partial recovery (AEA: Yearbook 2003).

In Europe, the drop in 2001 was not as bad, but it worsened in 2002. Japan, which was the European airlines' second-largest overseas market, underperformed both the EU and the US with almost no growth in 2002, as in 2001 (AEA: Yearbook 2003).

The global economic situation had affected consumer wealth and confidence, which in turn affected traffic volumes. The economic crisis in Argentina was probably the largest reason for why AEA carriers showed a significant negative result for the South Atlantic route group (AEA: Yearbook 2003).

2003:

The airline industry was hit with two exceptional traffic suppressing events in 2003 – the Iraq War and the SARS outbreak (AEA: Yearbook 2004).

Already in the start of the year demand had decreased in anticipation of the Iraq War. The Iraq War, which began in the end of March, had an immediate effect on AEA traffic levels which decreased with 15 % in Europe, 10 % on the North Atlantic routes and somewhere in between on the Far Eastern. Many routes to the Middle East were suspended (AEA: Yearbook 2004).

The European market recovered to growth almost as fast as the North Atlantic. The recovery from the drop due to the war itself was stalled by the substantial impact of the SARS phenomenon, which in particular degraded the load factors on Eastern routes for AEA carriers (AEA: Yearbook 2004).

Sustained powerful increases in the Chinese economy, pushing the passenger market into a position where it challenges Japan in importance for AEA airlines, came to an abrupt end in 2003 with the devastating impact of SARS (AEA: Yearbook 2003).

To illustrate the severity of the SARS phenomenon, during the six months from the start of the outbreak until the market returned to growth, Far Eastern traffic of AEA member airlines declined by 23.1 %. However, the SARS impact was not limited to Far Eastern routes and the loss of long haul traffic invariably affected short haul routes as connecting passengers were reduced in numbers. The industry was taken by surprise by the severity of the crisis, the speed with which it struck and the length of time it continued. Although the AEA member airlines executed capacity cutbacks, they did not match the traffic losses (AEA: Yearbook 2004).

Not until October-November 2003 did traffic begin to show 'normal' patterns, with growth rates of around 4-5 % in Europe, 7-8 % on the North Atlantic, and about 4 % to the Far East, giving an overall figure, including other regions, of around 6 % (AEA: Yearbook 2004).

Other things worth to mention about 2003 are that currency fluctuations, in the shape of a strong Euro compared to the US dollar, which affected costs, revenues and market conditions (see Appendix 1).

In 2003, world economies generally maintained their slow climb back from 2001, with a growth of 2% for the OECD countries as a whole. These were global figures, to which the European economies compared relatively poorly. With a 2003 growth of only 0.7%, the EU was the only main economic region to post inferior figures than in 2002 (AEA: Yearbook 2004).

2004:

The global airlines experienced a global economic slowdown as a consequence of the SARS phenomenon and the Iraq War and therefore suffered four years of losses and no growth. The continued crisis forced the airlines to build up new solutions to be able to meet the shifting needs of the customers and the market (AEA: Yearbook 2004).

Major swings characterized 2004, i.e. recuperation from the SARS phenomenon and effects of the war in Iraq. Minor growth could be observed on the Eastern routes, this however, decreased towards the end of the year (AEA: Yearbook 2005).

With an increase of 26 % in fuel price compared to the previous year, the industry continued to suffer from these very high prices. The extreme changes in exchange rates led to significant appreciation of the Euro against the US Dollar (see Appendix 1), which influenced the airlines' results (AEA: Yearbook 2005).

The strongest economic performance from a worldwide perspective since 1976 was observed in 2004. This with a growth of 5,1 %. The US and China accounted for half of the total increase together (AEA: Yearbook 2005).

In 2004, China had a GDP growth of 9,5 % followed by an investment boom. With GDP growths of 2,6 % and 2,4 % respectively, Japan and Europe continued to underperform. These were however the highest figures in a long time (AEA: Yearbook 2005).

Threats and difficulties still remained in spite of a positive economic environment. High fuel prices that affected inflation were most the evident signs of these hardships. The high

levels of fuel prices were expected to stay strong as the demand for crude oil increased around the world. An increase in the airlines' costs was an impact of the continued escalation of fuel price (AEA: Yearbook 2005).

As the EU experienced its largest expansion ever with ten new members, there was a significant growth in traffic to and from these countries (AEA: Yearbook 2005; AEA: Yearbook 2004).

The Single European Sky legislation was adopted in 2004, which created framework for a unified European airspace. The purpose of this legislation was to take apart the old fragmented Air Traffic Control system that has for the past 15 years caused delay, inefficiency and environmental damage. This would bring together a large number of sovereign territories and also similar pre-existing route networks (AEA: Yearbook 2005).

2005:

2005 was the first in many years where a stable traffic growth could be observed. The financial picture was still dominated by energy prices but for the world economy, 2005 was a good year (AEA: Yearbook 2006).

The by many anticipated inflation did not occur, in spite of the record high fuel prices. In the 25 EU member countries the GDP growth was down to 1,6 % compared to 2,5 % the previous year. The economies that generally showed the strongest growth were the smaller ones. The growth in Europe was mainly caused by high levels of export as a result of the general positive trend in world trade. This combined with the fact that the Euro depreciated against the US Dollar (see Appendix 1) (AEA: Yearbook 2006).

Consumer eagerness for spending was damped as a result of high energy prices that have pushed up total inflation (AEA: Yearbook 2006).

2006:

2006 was a prosperous year for the airline industry, when no remarkable external events affected the traffic (AEA: Yearbook 2007).

With all regions performing well the world economies grew strongly this year. China, India and Russia had an exceptionally strong growth of 10 %, 8,3 % and 6,5 % respectively. Europe had a growth that was not as strong (2,8 %), but still the highest this century. The US and Japan also showed strong growth rates, even though they were much lower. Germany's, UK's and France's strong performances were the main reason for the growth in Europe (AEA: Yearbook 2007).

The recuperation on the European market were due to factors such as; higher employment levels, lower interest rates, higher investment levels etc (AEA: Yearbook 2007).

Given that the European economy is mainly export-led, the strength of the Euro had negative implications for trade (see Appendix 1) (AEA: Yearbook 2007).

2007:

A ground-breaking Air Transport Agreement was signed between the EU and the US in April 2007, this after three years of negotiations. The agreement was developed to eliminate many of the rules governing operations between Europe and the US and will come in to effect in March 2008 (AEA: Yearbook 2007).

Traffic volumes increased extensively, as for the three previous years and the airline industry reached new heights this year. It was mainly the traffic on long haul routes that increased, while the development of domestic traffic was significantly weaker. Globally traffic in particular for the Middle East and African routes increased, whilst the traffic development on Latin American routes were considerably weaker. The traffic in Europe increased with 6,5 % compared to the previous year (Luftfartsverket: Flygets utveckling 2007, 2008).

The improvements in result for the airlines were due to the decrease in fuel price during the remaining half of the year in 2006. Many airlines have in addition to these implemented programs for reducing costs the last years (Luftfartsstyrelsen: Omvärldsbevakning 2007, 2007).

2008:

The previous two-year strong global business cycle was weakened in during the fall in 2007, mainly in the US. What started as a strong concern on the financial markets, spread to the prices of real estate, consumers' expectations about the future and consequently their consumption confidence. Concerns grew and spread to Europe during the spring and summer of 2008, and during the fall large parts of the world economy entered a recession (Luftfartsstyrelsen: Omvärldsbevakning 2008, 2008).

Air travelling is to a high degree dependant on the business cycle and has already affected the air travelling in Sweden as well as globally. The figure for the global international air travelling decreased with 2,9 % in September compared to the same month the previous. Many airlines was affected by the crisis and showed weaker financial results for the first nine months in 2008 compared to earlier. Reasons for this were a combination of high fuel prices and a decrease in demand for air travel (Luftfartsstyrelsen: Omvärldsbevakning 2008, 2008).

AEA stated in November 2008 that the single largest and most volatile cost factor for their members were the fuel (AEA: AEA meeting with AEA meeting with Czech government, policy makers and industry in Prague, 2008).

In 2008, a large number of airlines all over the world went bankrupted and more bankruptcies, take-overs and consolidations are to be expected (Luftfartsstyrelsen: Omvärldsbevakning 2008, 2008).

The highest growth in passenger traffic has during the last five years been observed on emerging markets in Asia and within Asian countries and in Europe. The growth on more mature markets such as Northeast Asia, Europe and North America has been slightly smaller. Furthermore, the growth in international traffic to and from the Middle East has been very strong (Luftfartsstyrelsen: Omvärldsbevakning 2008, 2008).

The intensive climate debate with the airline in focus has forced through several environment related measures and projects, both from the airline industry and from state governments (Luftfartsstyrelsen: Omvärldsbevakning 2008, 2008).

The European Commission directive to include the aviation in the EU emission trading system (ETS) was decided by the EU Council in October to be adopted. The decision was opposed by the US and IATA. The new directive is required to be inverted into national law within twelve months. Operators that will be included in the ETS are all flights arriving

and departing from an EU airport, excluding those with very low levels of traffic. This starts from January 1st 2012 (Air Transport World, 2008).

2.1.3 LCC vs. traditional airlines

The differences between LCCs and traditional airlines are in more than one aspect essential for the study of this thesis. Not only since the two groups are compared against each other but also because it is important to understand what defines the two different groups.

The concept of LCC was introduced in Europe in the beginning of the 1990s, however this concept has existed in the US for a longer period of time. During the last 10-15 years the numbers of LCCs have increased massively and 2007 was a record year for the LCCs, with over half a billion passengers in total. Internationally the LCCs represent more than 20 % of the world market and on the European market they represent almost 40 %, a figure which is expected to increase to 45 % in 2009 (Luftfartsstyrelsen: Flygtendenser 02/2008, 2008).

Most people have an intuitive feeling for what constitutes a LCC and a traditional airline respectively. However, where to draw the line between a LCC and a traditional airline has become more difficult over time as the traditional airlines have been forced to change their services to cut costs, to be able to compete. The define LCC-strategy assumes that both service- and cost levels deviate from those of the traditional airlines (Luftfartsstyrelsen: Flygtendenser 02/2008, 2008).

Below the most important differences between LCCs and traditional airlines are listed see Table 2).

Table 2. Differences between LCCs and traditional airlines (O'Connell & Williams, 2005)

Product features	Low cost carrier (LCC)	Full service carrier (Nätverksbolag)
Brand	One brand: low fare	Brand extensions: fare+service
Fares	Simplified: fare structure	Complex fare: structure+yield mgt
Distribution	Online and direct booking	Online, direct, travel agent
Check-in	Ticketless	Ticketless, IATA ticket contract
Airports	Secondary (mostly)	Primary
Connections	Point-to-point	Interlining, code share, global alliances
Class segmentation	One class (high density)	Two class (dilution of seating capacity)
Inflight	Pay for amenities	Complementary extras
Aircraft utilisation	Very high	Medium to high: union contracts
Turnaround time	25 min turnarounds	Short turnaround: congestion/labour
Product	One product: low fare	Multiple integrated products
Ancillary revenue	Advertising, on-board sales	Focus on the primary product
Aircraft	Single type: commonality	Multiple types: scheduling complexities
Seating	Small pitch, no assignment	Generous pitch, offers seat assignment
Customer service	Generally under performs	Full service, offers reliability
Operational activities	Focus on core (flying)	Extensions: e.g., maintenance, cargo

2.2 Industry change and Porter's Five Forces

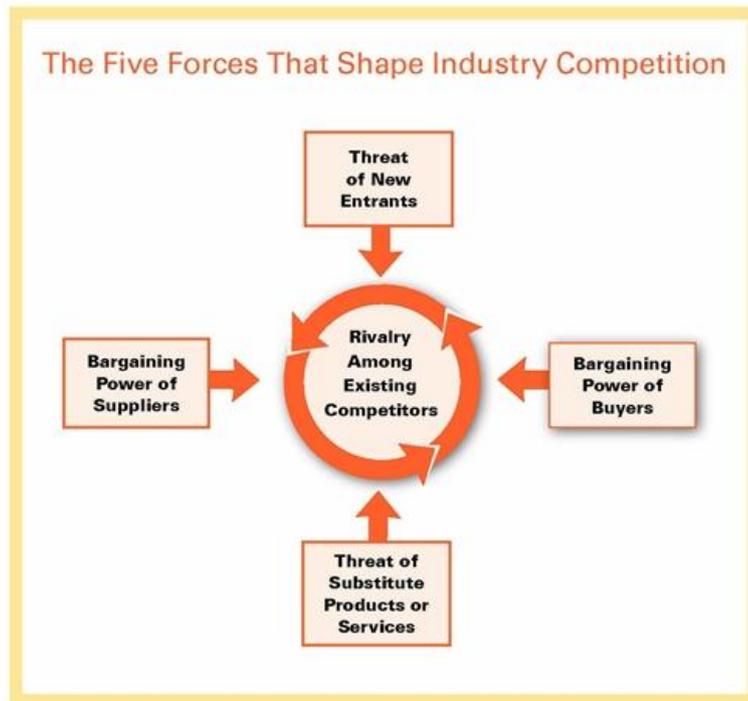


Figure 1. Porter's Five Forces (Porter, 2008).

To help clarify in what way the conditions of the airline industry have changed during the years of this study, 2000-2008, the model of the five forces that affect the industry structure by Michael Porter was included. (see Figure 1).

The five forces described in Porter's model together create the conditions for profitability in a specified company. The forces can (and most likely will) change with time and are specific to each industry (Porter, 2008).

Using the model made it easier to identify which forces that had, and which will, affect the European airline industry and, further more, in what way. With the model as guidance, after each section in this chapter, follows explanations of the dynamics in the European airline industry. This gives the reader an overview of the industry trends of the period and of the forces that cause the structure of the industry to change.

“In terms of response to purely economic stimuli, these figures are the weakest our industry has seen for 25 years, and with the major European economies still in transition to a recessionary state they cannot be expected to recover in the immediate future. The toxic combination of economic slowdown, a steep decline in business and consumer confidence, and fuel price-driven inflation which is hitting both the airlines and their customers is challenging the very structure of the industry.”

– Ulrich Schulte-Strathaus, *AEA Secretary General* (AEA: European Air line traffic in August/September, 2008 p. 1).

2.2.1 Rivalry Among Existing Competitors



The threat that arises from industry competition will be more significant the more competitors there are in a market, the stronger and more aggressive they are. But an industry can also be unattractive if it is very stable or decreasing in size. High fixed costs and high exit barriers will also contribute towards making it harder to compete within an industry. The degree of competition within an industry affects both prices (revenues) and costs. Tough price competition lowers the prices, while competition through extensive marketing increases costs (Porter, 2008).

2.2.2 Threat of new entrants



New entrants in a market are a threat because it changes the level of competition. How big this threat is depends on how high the entry barriers are of the market. High entry barriers mean fewer new entrants, and thus less of a threat (Porter, 2008).

2.2.2.1 Rivalry Among Existing Competitors and Threat of new entrants applied to the airline industry

Since the initiation of deregulation and liberalization of the European market in the mid 1980s, the competition in the airline industry has grown sharper due to the increase in the number of airlines, destinations offered and the number of passengers (Luftfartsstyrelsen: Flygtendenser 02/2008, 2008). During the last ten years the competition in the intra-European traffic has increased significantly, much so due to the growth in numbers of LCCs, which have increased their total market share, in terms of intra-European seat capacity, from 5 % in the summer of 2000 to 26 % in 2007 (AEA: AEA Yearbook 2001, 2001; AEA Yearbook 2007, 2007). This has challenged traditional airlines' strategies and forced them to look over their costs structure to keep up with the new actors in the market (Luftfartsstyrelsen: Flygtendenser 02/2008, 2008).

Depending on what routes the different airlines operate and on how large portion of their activities are on long haul traffic, they are subjects to different levels of competition from non-European airlines. North Atlantic routes, in passenger kilometer terms, forms the most important region for the AEA airlines and these face strong competition from US mega-carriers with an almost identical flight frequency (AEA: AEA Yearbook 2005, 2005).

The LCCs by now dominate the intra-European market and this has affected the market in several ways, e.g. the whole industry, but especially traditional airlines, have implemented extensive cost saving programs to take market shares of competitors (Luftfartsstyrelsen: Flygtendenser 02/2008, 2008).

The company structures of European airlines have also changed. With the deregulation and liberalization of the market the privatization of the then common 'flag carriers' (publicly owned airlines) also started. Among the 25 largest airlines in Europe, the share of publicly owned companies decreased from 28 to 16 % from 1996 until 2005. Today the airlines in the European industry are more diverse in their structures of ownership and many of the 'flag carriers' have been in part or fully privatized. Further there has been an explosive in-

crease in the number of private airlines operating in different segments (Luftfartsstyrelsen: Flygtendenser 02/2008, 2008).

Considering the Threat of New Entrants in Porter's model there is rather a reverse trend in the international airline industry today. As mentioned before, the industry has since the end of 2007 experienced an above average number of bankruptcies. The European industry is also made less attractive for new entrants today since there already is a problem of excess capacity (see Table 3) and competition is hard between already existing actors.

Table 3. Annual average growth rates (%) of traffic volumes (tkp) and capacity (atk – available tonnes kilometers) globally and for specific geographical regions (IATA: Financial Forecast, 2008).

Annual average growth rates, %	2006	2007	2008F	2009F	2006	2007	2008F	2009F
	Traffic volumes (tkp)				Capacity (atk)			
Global	5.3	5.3	2.8	2.9	4.1	5.0	4.0	2.2
Regions								
North America	3.6	2.9	0.1	-0.6	1.2	3.1	2.3	-3.4
Europe	4.9	4.7	3.2	2.9	3.9	3.2	3.9	2.8
Asia-Pacific	7.6	6.8	3.3	3.9	6.9	7.0	4.1	4.3
Middle East	11.8	15.1	10.8	7.9	12.6	12.8	10.9	9.3
Latin America	-3.4	5.7	5.6	4.2	1.5	6.9	5.5	5.1
Africa	7.0	5.9	-1.4	2.9	1.8	5.2	-0.9	2.2

Source: ICAO data to 2007. IATA 2008-09 forecasts. Domestic and international traffic. Includes passenger and cargo by weight.

Rather, with the increase in fuel prices (which have by end of 2008 fallen back) and other costs for the airlines, consolidations, co-operations, fusions and such are an inevitable development. The trend to create larger units, either by acquisitions or by mergers, can be expected to increase in the near future, this also among the LCCs (Luftfartsstyrelsen: Flygtendenser 02/2008, 2008).

2.2.3 Bargaining Power of Suppliers



Suppliers with great bargaining power can affect price and quality and are therefore not attractive for a company. This situation often occurs when there exist few substitutes to the supplier in question, when the supplier is delivering an important input to the company and when the costs of changing supplier are high.

To avoid suppliers with strong bargaining power it can be preferable for the company to strive for win-win relationships with its suppliers or, as an alternative, use a variety of different suppliers (Porter, 2008).

2.2.3.1 Bargaining Power of Suppliers applied to the airline industry

To understand the importance of different suppliers to the airline industry one need first to understand the general cost structure of the industry.

As mentioned earlier, AEA stated in November 2008 that that fuel is the single biggest, and most volatile cost factor for their member airlines (AEA: AEA meeting with AEA meeting with Czech government, policy makers and industry in Prague, 2008). Oil and fuel cost has during the period under study increased in importance (see Figure 2), much so due to sharp rises in the global market price of crude oil.

All airlines are dependent on the use of jet fuel and this is further more a cost that they can not affect. This makes the bargaining power of suppliers of jet fuel significant, even more

so in recent years as the part of the airlines' fuel cost has increased in relationship to total cost (see Figure 2)

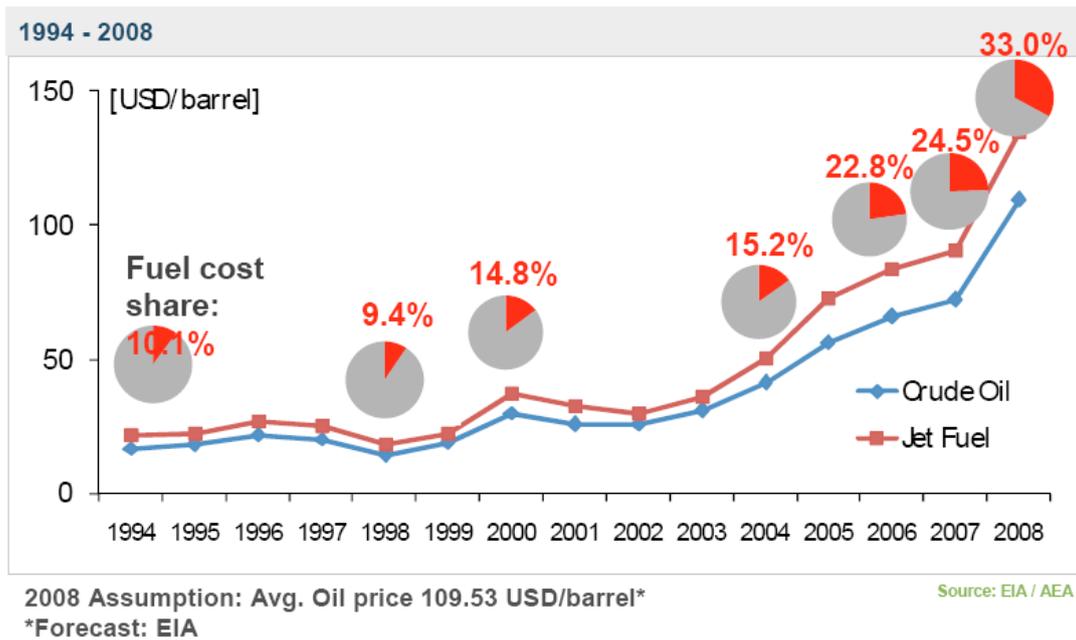


Figure 2. Crude oil and jet fuel price development and fuel cost share of total cost for an average airline (AEA: Industry outlook presentation, 2008).

2.2.4 Bargaining Power of Buyers



In the same way as for suppliers, customer segment becomes less attractive the stronger their bargaining power gets. This is due to the fact that the buyers' bargaining power affects the market price and thereby also revenues. Costs can also be affected when buyer bargaining power is high enough to demand changes in a company's products or services (Porter, 2008).

2.2.4.1 Bargaining Power of Buyers applied to the airline industry

During the ten years 1997 – 2007, the global international traffic almost doubled from 438 to 818 million passengers. Still, the total of national traffic in the world is significantly larger with more than 1,4 billion passengers, of which the huge national market of the US constitutes a considerable part. There has been an evident increase in the number of passengers within Europe as well the last ten years (see Table 4 below). This increase is, in large part, a result of the expansion of the LCCs (Luftfartsstyrelsen: Flygtendenser 02/2008, 2008).

Table 4. Growth of scheduled RPK (AEA: Yearbook 2007 & 2000).

Scheduled RPK	2006 (millions)	1999 (millions)	% change
Intra-Europe	226 647.0	121 883.4	85,95%
Total	736 952.3	563 375.2	30,81%

The amount of business travellers has dropped and leisure travelling has increased during the same period. People travelling in business have traditionally been the most important source of income for the traditional airlines. Although business travellers only accounts to 15 % of the airlines' passengers they represent 28 % of the revenues. The trend of this type of customer, increasingly prioritizing lower prices to a high level of service is troublesome for the airlines not in the LCC segment (Luftfartsstyrelsen: Flygtendenser 02/2008, 2008).

Not surprisingly, given the evidence on income elasticity, the industry is sensitive to fluctuations in the general level of economic activity (Johnson, 2003). Since the European and most other economies in the world have experienced significant fluctuations during the period of study this has evidently affected the amount of air traffic. Figure 3 shows how growth in GDP has developed since 1996.

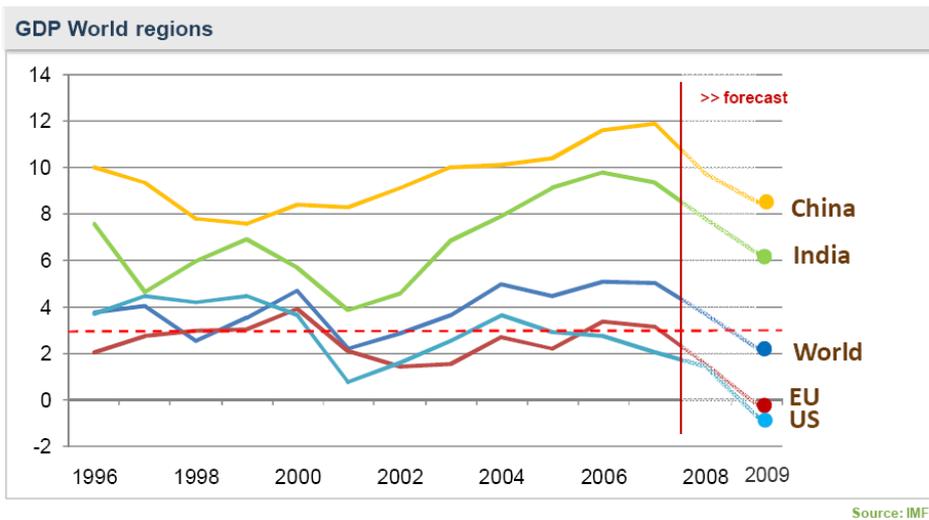


Figure 3. GDP growth for different regions of the world (AEA: AEA meeting with AEA meeting with Czech government, policy makers and industry in Prague, 2008).

In Europe, passenger development reached a high late summer 2008 and has since then had a weak trend. This was the first time since the early 1980s that the traffic loss was due to essentially economic factors (AEA: European Air line traffic in August/September, 2008). AEA predicts, in accordance with this, that the current economic downturn and weak economic outlook will reduce demand increasingly in the near future (AEA: AEA meeting with AEA meeting with Czech government, policy makers and industry in Prague, 2008).

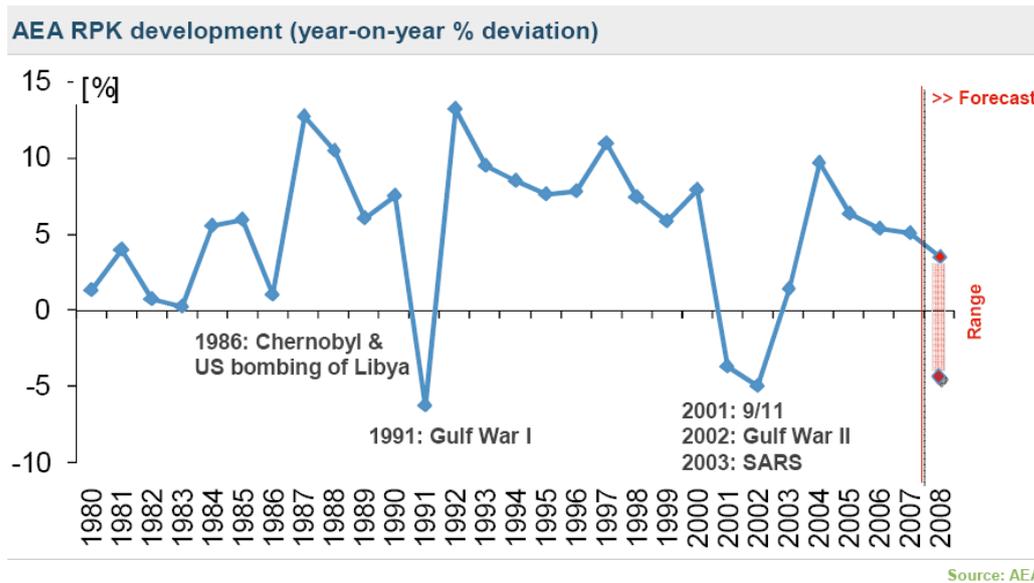


Figure 4. The development of AEA member airlines' RPK (Revenue Passenger Kilometers), and how industry crises have affected it, from 1980 until May 2008, and a forecast made by AEA for the rest of 2008 (AEA: State of the industry, 2008).

As hinted before, customer confidence have also, throughout the years, been affected by sudden shocks in the world. In 1990-91 during the six weeks of the Gulf War the surrounding world was hit hard, and the traffic in Europe fell drastically compared to the previous year. A corresponding fall in capacity did however not match this fall. Capacity utilization, measured by RPK as a percentage of ASK fell considerably as a result of this (see Figure 4) (Johnson, 2003).

A sudden shock that also led to an instant extensive decline was the terrorist attacks of September 11th in 2001. The airlines did this time however react more rapidly by cutting capacity and employment. Significant capacity problems prior to September 11th were however the reason some of these cuts (Johnson, 2003).

Aggressive price cutting and strong marketing campaigns were the LCCs way of responding to the crisis. This did in some cases lead to substantial increases in traffic and large expansion plans, e.g. Ryanair had at the beginning of 2002 orders for 100 new aircraft, this when the major airlines were reducing their fleets (Johnson, 2003).

As mentioned previously (section 2.3.2.1), the LCCs dominate the intra-European market and this has affected the consumer behaviour of this market in a number of ways. New trends of the market are; an increase in weekend travelling at the cost of longer vacations and also an increase in online booking of air travels, which has increased the bargaining power of the customer by making it easier to compare prices and other alternatives, but at the same time has decreased distribution and agency costs for the airlines (Luftfartsstyrelsen: Flygtendenser 02/2008, 2008).

Air passengers of today are very aware of prices. Both business travellers and those travelling for leisure often make plans and book flights based on fare levels. As a result, even small differences in price level between airlines significantly affect number customers.

The LCCs were early in realizing the price sensitivity of customers. Today they represent a significant part of the intra-EU market and they are steadily gaining market shares. Competition and price awareness has meant an increased pressure for airlines to lower their fares. To achieve higher cost efficiency, many airlines have recent years accordingly made extensive rationalizations concerning their operating cost structure e.g. by making it easier to book flights online and by cutting back on customer service. The price awareness of passengers makes many airlines focus their marketing on fare levels (Flygets utveckling 2007, 2008).

2.2.5 Threat of Substitute Products or Services



The substitutes available affect the company and its competition to a high degree. The more and the closer substitutes, the more effected are prices and thus revenues (Porter, 2008).

2.2.5.1 Threat of Substitute Products or Services applied to the airline industry

As a consequence of in the long term increasing oil prices, much due to decreasing reserves and increasing cost to extract oil from current and new reserves, other alternatives are needed but yet not found and implemented on a large scale.

Increasing environmental concern, expressed by changing consumer preferences and increasing government regulation, is also a threat for the long term growth of the airline industry. Another force affecting the future structure of the European airline industry, which will not be discussed further in this paper, is the affect of political regulations on such as system for trading of certificates of emission and taxes. During recent years high speed trains have appeared as an important competitor to the European airlines, especially on routes like Brussels – Paris, London – Paris and Amsterdam – Paris. Also within national markets, such as France and Spain, the competition of high speed trains has gained importance (Luftfartsstyrelsen: Flygtendenser 02/2008, 2008).

2.3 Ratio analysis

Ratio analysis is a form of corporate analysis. Corporate analysis, from the point of view of an external stakeholder, can refer to the analysis of a variety of different aspects of a company, such as of market development, competitiveness, financial stability and profit development (Carlson, 2004).

Quantitative analysis is, by practioners, the most commonly used form of corporate analysis. The financial aspect of corporate analysis is particularly suited for quantitative analysis. Financial analysis can easily be related to the company's current bookkeeping, since all companies present their activities using quantitative measures in reports such as balance sheets and income statements. Through combining different parts of the available reports, new information can be generated. This type of new information is usually called ratios and can be used for analyzing the company's development in a more comprehensive way and makes it easier to compare it to competitors. Already existing information is sometimes referred to as ratios as well, this when the information in question is believed to be of importance for understanding and evaluating the development of the company (Carlson, 2004).

Ratios can thus be defined as:

→ *Important financial information, derived from one or more accounting values and/or factors of re-calculation*

→ *Important existing value from accounting reports*

Accordingly ratio analysis is defined as:

→ *An evaluation of the level of different ratios and their respective development/ trend.*

2.3.1 Different purposes of ratio analysis

One of the most common purposes of ratio analysis is to analyze the own company's status and trends of development. Another important area in which ratio analysis is used is for following the development of competing firms in order to evaluate a company's relative development. Without the knowledge of the normal levels of a ratio for an industry, it is not possible to set realistic objectives within the own company (Carlson, 2004).

Apart from the internal purposes of using ratio analysis, external parties may also want to evaluate a company based on financial reports information. Calculating and comparing financial ratios helps to avoid the problems involved in comparing companies that are of different sizes (Jaffe, Jordan, Ross & Westerfield, 2008). Financial ratios based on information from financial reports are frequently used with the explanation that they are considered to be hard, objective measures and that they are based on publicly available information (Balcaen & Ooghe, 2006).

2.4 The ratios chosen for this thesis

The five financial ratios included in the financial aspect part of the observational scheme will now be presented. These are followed by a presentation of the three ratios specific to the airline industry.

2.4.1 Traditional financial ratios

The following are traditional definitions financial ratios, based on information available to the public through financial reports from companies.

	Measure of...
Current ratio	liquidity/short-term solvency
Quick ratio	liquidity/shot-term solvency
Debt-equity ratio	indebtedness/solvency
Profit margin	profitability
Return on equity (ROE)	profitability

2.4.1.1 Liquidity

Liquidity ratios are intended to measure short-term solvency of a company. Of primary concern is the company's ability to be able to cover for short term claims and consequently, the focus of these ratios are current liabilities and current assets. When looking at current assets and liabilities, one advantage is that book values and market values are likely to be more comparable. They do not exist long enough to get seriously out of step, but a negative side effect is that current liabilities and assets change relatively rapidly which means the measure could show a very different picture in the near future (Jaffe et al., 2008).

2.4.1.1.1 Current ratio

The current ratio is a well known and widely used ratio. It is defined as the quotient of current assets and current liabilities and is a measure of short-term liquidity. A short-term creditor of a company would prefer this ratio to show a high value, while for the company itself a high current ratio value might be a bad sign indicating that the company is using its short-term assets in an inefficient way. In general, a financially healthy company should have a current ratio of at least 1. A value less than 1 means that net working capital is negative (current assets – current liabilities). Though, this might not be a bad sign if the company has unused granted credit if needed (Jaffe et al., 2008).

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

2.4.1.1.2 Quick ratio

The quick ratio is similar to the current ratio but it excludes inventory from the current assets. Inventories are normally the least liquid current asset and also a common source divergence of the market value of current assets from the book value of current assets, e.g. due to non-consideration of quality of the inventories. Also inventory might turn out to be damaged, lost or obsolete. If the company has over estimated demand and has a significant proportion of current assets tied up in inventory, this might be hard to sell and thus hard to turn in to cash quickly (Jaffe et al., 2008).

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{Inventory}}{\text{Current liabilities}}$$

2.4.1.2 Indebtedness

Indebtedness or solvency can be a threat to the company's survival, this due to the risk that a high level of indebtedness implies (Sandberg, 1993). Long-term solvency ratios intend to address the company's long-run ability to meet its obligations to creditors and claimholders. These ratios are sometimes called financial leverage ratios or just leverage ratios (Jaffe et al., 2008). The level of indebtedness shown by a company is, amongst other factors, often influenced by which part of the business cycle the company is in (Carlson, 2004).

2.4.1.2.1 Debt-equity ratio

The debt-equity ratio is defined as average debt in relation to average equity, and is a measure of level of indebtedness. The relationship between solvency and the debt-equity ratio is that a debt-equity ratio of 4 corresponds to a solvency of 20% (Sandberg, 1993). This ratio takes into account all the debts and obligations that the company has to its creditors and claimholders (Jaffe et al., 2008). Shown by the relationships in the leverage formula, an increase in the level of a company's debt-equity ratio, i.e. its use of leverage, will cause ROE to increase. Also the average cost of debt will increase with an increase in such a case, which shows that an increase in leverage means an increase in risk to creditors. (Wramsby & Österlund, 2004).

$$\text{Debt-equity ratio} = \frac{\text{Total debt}}{\text{Total equity}}$$

2.4.1.3 Profitability

The ratios measuring profitability are probably the best-known and most widely used of all financial ratios. In different forms they intend to measure operation management and use of assets efficiency (Jaffe et al., 2008).

2.4.1.3.1 Profit margin

Companies often give this measure of profitability a great deal of attention. A high profit margin is of course in general desirable. However, margins that are smaller are not necessarily bad. A lower profit margin on each unit sold can mean a higher sales volume and thus a higher total profit. Different industries are characterized by having very different profit margins (Jaffe et al., 2008).

$$\text{Profit margin} = \frac{\text{Net income}}{\text{Sales}}$$

2.4.1.3.2 Return on equity (ROE)

ROE is a measure of equity holder's return during the year. It is a frequently cited number and therefore it is important to remember that it is showing an accounting rate of return. For this reason, ROE is at times referred to as return on net worth. ROE also reflects the company's use of leverage (Jaffe et al., 2008). As previously mentioned, an increase in the company's level of indebtedness will have a positive effect on ROE (Wramsby & Österlund, 2004).

$$\text{ROE} = \frac{\text{Net income}}{\text{Total equity}}$$

2.4.2 Industry specific ratios

Three key ratios often recurring in financial reports of airlines and in airline industry reports are Revenue passenger kilometers, Available seat kilometers and Passenger load factor. All of these ratios are closely connected to one another and therefore will likely show similar trends. However, they all contribute with interesting aspects of sales volume, capacity and capacity utilization.

	Measure of...
Available seat kilometers (ASK)	Passenger carrying capacity
Revenue passenger kilometers (RPK)	Sales volume of passenger traffic
Passenger load factor (PLF)	Capacity utilization

2.4.2.1 Available seat kilometers (ASK)

ASK expresses the number of seats available for sale multiplied by the distance flown and is a measure of the carrying capacity of the airline (British Airways: Report and Accounts for the year ending 31 March 2008, 2008; AEA: European Air line traffic in August/September, 2008).

$$\text{seats available} \times \text{distance flown}$$

2.4.2.2 Revenue passenger kilometers (RPK)

RPK is a measure of the number of revenue passengers carried multiplied by the distance flown (British Airways: Annual Report and Accounts 2007/08, 2008). A revenue passenger is a passenger for whose transportation an air carrier receives commercial remuneration, thus excluding passengers travelling under fares available only to airline employees and babies and children who do not have a seat of their own.

The RPK of an airline is the total number of kilometres travelled by all passengers. It is a measure of sales volume of passenger traffic and is often used to measure passenger growth of a single airline or the industry as a whole (IATA: Financial forecast, 2008).

$$\text{revenue passengers} \times \text{distance flown}$$

2.4.2.3 Passenger Load Factor (PLF)

PLF of an airline, sometimes simply called the load factor, is a measure of capacity utilization, in other words it shows how much of an airline's passenger carrying capacity is used. It is expressed as passenger-kilometres flown as a percentage of seat-kilometres available.

As airlines frequently have heavy fixed costs and is capital demanding, the efficiency with which assets are used is crucially important. This is an important efficiency measure, but it does not consider the pricing and the profitability at which the capacity is sold. It also implicitly assumes that the airline's fleet is fully utilized in terms of the number of kilometres flown (Lufthansa: Glossary, 2008).

$$RPK \div ASK$$

3 Method

This chapter starts off by presenting the primarily chosen research area and then discusses the methodology used for this thesis, the methodological problems with the chosen method and source criticism. A developed model for observation is also presented.

3.1 Primarily chosen research area

Since the current crisis in the airline industry had resulted in a large number of bankruptcies and financial hardship for many other airlines, the initial idea with this thesis was to investigate different airlines by using a statistical failure prediction model. This to see if financial distress and bankruptcy could be predicted beforehand. The thought was to analyze financially healthy companies, unhealthy ones and even already bankrupted companies with this type of model, which is based on historical data on a specified number of financial ratios.

A lot of time and effort was put into finding a suitable model of this type and one was finally chosen. This was a failure prediction model based on logit analysis developed in Belgium and the persons who had developed it was even contacted to get a clear understanding for how to, as correctly as possible, calculate the financial ratios included in the model.

Sadly, it soon became evident, once gaining more understanding of the model, that the number of airlines with complete annual reports available (since detailed information was needed for the specified ratios) would be too few for a sample to conduct a statistically valid study on. At first, the thought was then to keep part of the idea with the failure prediction model. This by analyzing a smaller number of airlines using the financial ratios included in the failure prediction model initially chosen. Instead of a statistical study, a case study type of descriptive analysis would have been used, investigating how the specified ratios had developed within the company over time and then comparing the development of the ratios in airlines of different financial health with each other.

However, factors such as the complexity of the financial ratios included in the chosen model, in terms of finding all information in the annual reports, determining which items to include and missing data, hindered the execution and finalizing of this idea. Also the idea for the study was seemingly difficult to communicate successfully and left readers confused. Keeping some of the initial ideas, we formulated a research study more suitable to conduct.

3.2 Research approach

There are principally two ways of conducting a research study. These two approaches are the deductive approach and the inductive approach and they set the design of the research project.

A deductive approach involves testing a theory by research strategies that will lead to a conclusion that either supports the theory or not (Lewis, Saunders & Thornhill, 2007). The researcher uses the knowledge he/she has about the research area and theories to test theories and draw conclusions (Bryman & Bell, 2007). On the other hand, an inductive approach starts from the bottom with empirical data that is used to develop to a new theory (Lewis et al.). Here the researcher begins with an empirical study and then the results are

evaluated against relevant theories and eventually a research problem is generated (Bryman & Bell, 2007).

This thesis takes a deductive approach since the purpose is to draw conclusions based on existing theories. Thus, numerical data has been used and analyzed and conclusions have been drawn based on these existing theories. This research approach is suitable mainly because the topic of company- and industry analysis is well studied and many theories revolve around it. Also since the aim is to research the reality in the airline industry with help of different theoretical tools.

3.3 Qualitative and quantitative approach

All non-numeric data or data that have not been quantified is referred to as qualitative data while numerical data or data that have been quantified is referred to as quantitative data (Lewis et al., 2007).

To answer the research questions and the purpose of this thesis, the data gathering mostly dealt with numerical data and analysis of this data. Quantitative calculations for the financial ratios; current ratio, quick ratio, debt-equity ratio, profit margin and return on equity (ROE) have been made. A quantitative method, according to the definition above, has therefore been used for this thesis. But also qualitative data of short and long texts has been analyzed e.g. scientific articles and articles of current interest to get a deeper understanding of the topic. To get more depth and detailed description of the topic, a qualitative approach has also been used in form of interviews (see chapter 3.5 *Interview*).

3.4 Primary and secondary data

Primary data is collected for the research project under study and secondary is data that were originally collected for some other purpose (Lewis et al., 2007). In this thesis the focus is on secondary data since existing numerical data was extracted from companies' annual reports and interim reports. This was complemented with interviews (see chapter 3.5 *Interview*) that specifically was collected for this thesis, and therefore referred to as primary data.

3.5 Data collection and literature search

The numerical and financial data used in this report are extracted from the annual reports and interim reports of the six European airlines from year 2000 until the third quarter of 2008. The annual reports and interim reports were found through the companies' web pages. Additional company related information was also collected from the companies' web pages.

General airline industry specific information such as jet fuel and crude oil price, airline share price, trends on the European market, financial forecasts and industry outlooks was gathered from the industry organization IATA, the trade organization AEA and The Swedish Aviation Authority.

All books, scientific articles, articles on earlier studies in the same field, news articles and financial theories are available on the internet, and at Jönköping University's library as well as at the library's database.

3.6 Model for observation

There are basically two types of observations; structured and unstructured. A structured observation is a type of observation where the behaviours and events that are to be studied are determined beforehand and an observational scheme is developed. This requires a well defined problem and purpose. An unstructured observation entails an explorative problem and purpose where no complete observational scheme is used (Paten & Davidson, 2003).

This thesis uses a structured observation to investigate and evaluate the development of the financial situation of the airlines over the chosen period. This requires a specified model for evaluation. The developed scheme for this thesis is a three-levelled process, which was used for the analysis of each individual airline and thereafter for a comparative analysis between the chosen airlines of the study. In the comparative analysis the airlines were compared to each other within two groups; traditional airlines and LCCs separately.

The first level covers sudden shocks, change in macroeconomic factors, and general change in industry structure and trends. These all affected the overall change of the European industry during the years of this study.

The second level, which is the first of a two-step analysis, is divided in two main groups; financial aspects and industry specific aspects of the airline(s). The information from the first level was used as the take-off point for the analysis of these aspects.

The third level constitutes the second step of the two-step analysis and focuses on the development of financial ratios that describe the capital structure and profitability of the airline(s).

This three-levelled process, a two-step analysis preceded by an informational framework, led to grand conclusions.

Beyond the numerical data from annual reports that are the basis of these measurements, other relevant information about the airlines was obtained to complement the structured observational scheme.

Below follows a graphical conceptualization of the three-levelled process.

LEVEL 1

Take-off point

The operations of airlines in the European industry have during the period of study been affected by:

- sudden shocks, such as the terrorist attacks of September 11, 2001 and SARS.
- change in macroeconomic factors, such as GDP growth in different regions, oil price and fluctuation in exchange rates.
- general change in industry structure and trends.

LEVEL 2

1. Development in the airline in terms of:

Industry specific:

Available seat kilometers (ASK)
Revenue passenger kilometers (RPK)
Passenger load factor (PLF)

Financial:

Cost - *Fuel*
 - *Employee*
 - *Other*

LEVEL 3

2. Development of the financial situation in the airline(s) in terms of:

Liquidity - *Current ratio*
 - *Quick ratio*
Indebtedness - *Debt-equity ratio*
Profitability - *Profit margin*
 - *Return on equity (ROE)*

CONCLUSIONS

3.7 Interview

The intention with the interviews was to use them as a complement in the study to get analysts' viewpoints of the current situation and their forecast for the future for the airline industry.

Throughout the working process several names of analysts were noticed. Three well-cited persons who all work in different sectors and organizations were chosen. Anders Lidman (see appendix 2), an analyst, owner and CEO of Aeropol, represents the private sector. Helen Jakobsson (see Appendix 3), an analyst who works at the Swedish Civil Aviation Authority (Luftfartsstyrelsen), represents the public sector. Initially the interview was intended for Jacob Gramenius, an analyst at the Swedish Civil Aviation Authority (Luftfartsstyrelsen), but who due to lack of time recommended Jakobsson. Even if not from an actual interview, statements by Chris Tarry (see Appendix 4), a well recognized airline industry analyst (e.g. published on the IATA website) who established Aviation Industry Research and Analysis (CTAIRA), brings a general international viewpoint to the topic.

The interviews were conducted through quite broad open questions (see Appendix 1), to allow the respondents to elaborate and answer in their own terms. The questions concern the European airline industry in general, today's crisis and the future outlook for the airline industry. These questions, together with a description of the purpose of this thesis, were sent by e-mail to Lidman and Jakobsson, while a compilation of statements made by Tarry were put together based on the interview questions.

A compilation of the interviews can be found in chapter 4.7 *Analysts viewpoints on the current crisis and the future outlook for the industry*.

3.8 Reliability and validity

Reliability has to do with consistency and to what extent the data collection technique used will yield constant outcomes or same conclusions. In other words the repeatability of the measurement. Validity can be explained as the strength of the conclusions or propositions. It is the degree to which data collection methods precisely measure what they were proposed to measure and research findings are about what they acknowledge to be about (Lewis et al., 2007).

It is always important to strive for a as high reliability and validity as possible. Companies' annual reports and interim reports must be seen objectively from an external perspective. This means that the numerical data presented can only be interpreted in one way which in turn strengthens the reliability in this thesis. On the other hand there are some arguments that contradict this and these will be discussed further in chapter 3.4 on *Source criticism*.

Information from different organizations such as IATA, AEA and the Swedish Civil Aviation Authority (Luftfartsstyrelsen) must be seen as valid and reliable, since these are large and well-known organizations. Further, IATA and AEA base their statistical data on primary data from their member airlines, which also makes it more reliable. Even though only the traditional airlines, out of the actors included in the study, are members of AEA and IATA, this does not decrease the validity or relevance of the information used in this thesis from these sources. When referring to increases or decreases in traffic for certain international routes this still just refers to the traditional airlines, since the LCC almost exclusively operate on the intra-European market. Statistics about macroeconomic factors such as

price of crude oil and GDP growth the organizations refer to other well recognized organizations, e.g. IMF and EIA.

As for the interviewees, these are all well cited and respected analysts in the airline industry and must therefore be considered as trustworthy. Even though Gramenius at the Swedish Civil Aviation Authority (Luftfartsstyrelsen) was intended as an interviewee, his recommendation of Jakobsson ought to be reliable.

3.9 Comparability

As discussed in chapter 1.4 Selections and delimitations, the airlines included in the study was chosen with the aim to achieve a level of comparability as high as possible. Though, some issues for comparability still remain.

The fact that some of the airlines use different fiscal years is one of them. Three out of the traditional airlines; Finnair, Iberia and Lufthansa end their fiscal year 31st of December, while British Airways end their fiscal year 31st of March. The issue is even more apparent between the LCCs, EasyJet and Ryanair, which end their fiscal years half a year apart. EasyJet 30th of September and Ryanair 31st of March. The differences were kept in mind when conducting the analysis.

Another aspect in which the airlines chosen for the study differs is in which currency they operate and thus in which they present their annual reports. British Airways and EasyJet present their annual reports in GB Pounds while the rest present theirs in Euros. This will however not affect the analysis since the study focuses on the development of reported items and ratio.

Another, though minor, issue was that Ryanair report levels of Revenue Passenger *Miles* (RPM) and Available Seat *Miles* (ASM) where the other airlines report RPK and ASK. For the same reason as stated above about the difference in currencies, this issue does not affect the analysis.

3.10 Methodological problems

In this thesis the focus is on financial ratio analysis, based on financial statements, as a way of evaluating the development of company profitability and capital structure. This is a very good and vital method when analyzing a company. But there are other and more factors, apart from the information shown by financial ratios that affect a company's profitability and capital structure. It is therefore inappropriate to state that all relevant information to evaluate a company is reflected in its annual reports. One must not neglect factors such as; management experience, education, age, motivation, social skills, leadership quality, firm age and size may also be important factors to look at. Such reflections have been taken into consideration.

Other methodological problems are the issue of selecting more or less essential financial ratios. Even though we have studied many different ratios and know that numerous ratios exist, a selection has to be made. And the issue of essential ratios or not, will always exist.

Since decision-makers in companies partially can decide what to present and what not to present in a company's annual report, it have to be taken into consideration that a ratio with the same name in two different annual reports can contain different calculations depending on how decision-makers want to highlight the company. To get around this issue

as much as possible, and to be able to compare the ratios more accurately, own calculations of the ratios were made.

One other issue that is important to take into consideration is that six European airlines are not representative for the whole European airline industry. Therefore, generalizability is not something that can be taken for granted from analysis of the empirical findings.

3.11 Source criticism

Annual reports are the major source used in this thesis. While annual reports are considered to give a fair and true view of a company's financial situation, one must not neglect to also assume the opposite. Biased information and positive distortion of numbers is not unusual. Companies' tend to manipulate their figures, this is especially true and common for unhealthy or failing firms. Earnings can be adjusted upwards to give a more positive view of the situation and companies own estimations of key ratios can also be misleading.

It is also important to take into consideration that annual reports of different companies can contain different information. Also other information in annual reports or on the companies' web pages can have a positive distortion.

All these issues have been kept in mind while conducting this study and in cases possible the issues have been minimized, e.g. own calculations of the financial ratios were carried out.

4 Empirical findings and analysis

This chapter will present the empirical findings of this study and the analysis of these. In the first section each airline is briefly presented and thereafter the empirical findings of the same are presented and analyzed. The first section is followed by a comparative analysis of all the airlines, which in turn is followed by a final section summarizing and analyzing the analysts' viewpoints of the European airline industry.

4.1 The airlines

Below will be found a short introduction to each of the airlines included in this study. This will be followed by a presentation of the calculated financial- and industry specific ratios this thesis will base its analysis on. The ratios are firstly summarized in tables, which in turn are followed by an analysis in accordance with the developed three-levelled observational scheme.

Airlines	Type of airline	Headquarters based
- British Airways	traditional	UK
- Finnair	traditional	Finland
- Iberia	traditional	Spain
- Lufthansa	traditional	Germany
- Easy Jet	LCC	UK
- Ryanair	LCC	Ireland

No additional introduction of the financial ratios will be made, but to facilitate and refresh the readers' memory, below is presented once again the table with explanations of the industry specific ratios.

	Measure of...
Available seat kilometers (ASK)	Passenger carrying capacity
Revenue passenger kilometers (RPK)	Sales volume of passenger traffic
Passenger load factor (PLF)	Capacity utilization

4.1.1 British Airways

British Airways (BA) was founded in 1974 by the merger of the two airlines BEA (British European Airlines) and BOAC (British Overseas Airways Corporation) (BA: About us; Student Kit; Factbook 2006, 2006).

BA is today classified as one of the world's largest international airlines and during 2007 the company carried over 33 million passengers to around 600 destinations worldwide. The airports that BA operates from are London's two principal ones, Heathrow and Gatwick. The company's fleet consists of 245 aircraft which is one of the largest fleets in Europe (BA: About us; Corporate Profile, 2008).

BA is a member of the oneworld alliance and in 2006 its two most important route groups were the North Atlantic and the Far East. (see Figure 5) (AEA: Yearbook 2007).

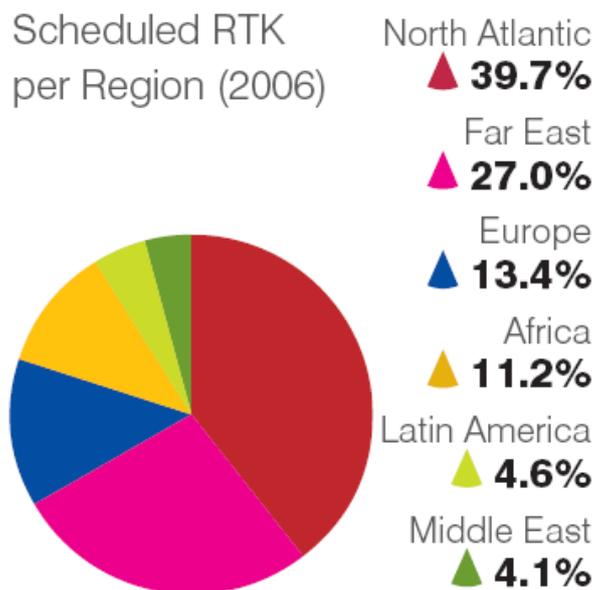


Figure 5. *RTK – Revenue Tonnes Kilometers (both passengers and cargo included) (AEA: Yearbook 2007)

Important events for BA during the period of study

(BA: Report & Accounts 2000/01 – 2004/05; BA: Report and Accounts for the year ending 31 March 2008)

2000

- Sale of BA's French subsidiary; Air Liberté.

2001

- Acquisition of British Regional Air Lines Group (BRAL), which was integrated with another wholly-owned subsidiary under the name British Airways CitiExpress.
- Acquisition of 50 % in Accoladia Ltd, a company in partnership with Thomas Cook Holdings Ltd.

- Disposal of Go Fly Ltd.

2003

- Sale of BA's German subsidiary DBA (previously Deutsche British Airways).

2004

- Sale of 18,25 % holdings in Qantas.
- A Joint Business Agreement (JBA) was signed with Iberia to establish profit-sharing on two routes.

2008

- A Joint Business Agreement (JBA) was signed with American Airlines and Iberia to improve the customer service.

Table 5. British Airways industry specific ratios

British Airways			
	RPK (million)	ASK (million)	PLF (%)
2000	123 197	172 524	71,40
2001	106 270	151 046	70,40
2002	100112	139 172	71,90
2003	103 092	141 273	73,00
2004	107 892	144 189	74,80
2005	109 713	144 194	76,10
2006	112 851	148 321	76,10
2007	113 016	149 545	75,60
2007 Apr-Sept	59 336	75 705	78,40
2008 Apr-Sept	57 237	76 726	74,60

BA's sales volume, measured by RPK, decreased for two years after year 2000, but has since then (from 2003) had a positive trend (see Table 5). The decrease 2001 and 2002 was probably mainly due to the traffic losses followed by the terrorist attacks of September 11th. Since BA's most important route group is that of the North Atlantic (see figure 5), for which the largest drop in traffic volumes was recorded for the industry as a whole, they suffered significantly from this event. The economic slowdown that followed the attacks is probably the reason why the trend continued in 2002. The positive trend from 2003 and onwards can be explained by the stronger economic situation, globally and in BA's important destination markets. Even if the SARS phenomenon most likely significantly affected the company's traffic volumes on the routes to the Far East during early 2003, the growth in demand for other routes, driven by recuperating economic development, helped BA to still show a marginal growth in RPK in total. The outbreak of the Iraq War did probably not affect BA more than marginally, this since the North Atlantic market, important to BA, recovered relatively fast from the shock. The remaining years (2004-07)

there were a steady growth in RPK probably due, partly to the positive global economic development and partly to the general industry trend of increased interest for air travel.

The appreciation in the exchange rate of the Euro against the US Dollar during this period (2004-07) probably also increased demand for travel on the North Atlantic routes and destinations with its currency tied to the US Dollar. When looking at the latest figures (2008 Apr-Sept) the positive trend does not seem to continue for 2008, since the latest figures are lower than those from the same period of 2007. The global economic slowdown and the financial crisis in the US during this period is the most likely explanation for this development of RPK.

The capacity of BA, measured by ASK, has been adjusted to the trend of RPK and therefore they follow the same trend. BA was seemingly successful in adjusting capacity to demand following the sudden shocks of the period. This can be observed by the relative stable level of capacity utilization measured by PLF. The only deviation from the trend is that capacity increased for 2008 so far (2008 Apr-Sept) compared to the same period 2007, while sales volume (RPK) decreased, comparing the same two periods (see Table 5).

Table 6. British Airways cost structure (* - in million £)

British Airways						
	<i>Fuel*</i>	<i>Employees*</i>	<i>Other*</i>	Total cost*	Total cost/RPK*	% change of total cost/RPK
2000	1102	2376	5420	8898	0,0722	
2001	1028	2329	5093	8450	0,0795	10%
2002	842	2107	4444	7393	0,0738	-7%
2003	922	2180	4053	7155	0,0694	-6%
2004	1128	2235	3853	7216	0,0669	-4%
2005	1632	2346	3832	7810	0,0712	6%
2006	1931	2277	3728	7936	0,0703	-1%
2007	2055	2166	3657	7878	0,0697	-1%
2007 Apr-Sept	983	1069	1851	3903	0,0658	
2008 Apr-Sept	1494	1161	1959	4614	0,0806	23%

The total cost per unit sold (per RPK) development of BA does not comport entirely with the previous discussion about how the industry as a whole has experienced increases in costs such as cost of fuel and for safety enhancements. This might be because of the trend in the industry of increased competition, especially from LCCs, which has forced the traditional airlines such as BA to focus on reducing costs and being more efficient to be able to compete in the market while still being profitable. However, a significant increase in total cost per unit can be observed for 2001 (see Table 6). This does comport with the discussion about increase in cost for that year.

Looking at the development of the cost structure of BA it becomes obvious that the increase in price of crude oil (2004 – 2008) has led to an increase in the price of jet fuel. Fuel cost, as a vital input for any airline, has therefore increased; both in total terms and as the part of total cost (see Appendix 2). In year 2005, the combined effect of an increase in fuel price and a depreciation of the Euro against the US Dollar led to an even stronger development of the actual fuel cost for BA.

Table 7. British Airways financial ratios

British Airways					
	Current ratio	Quick ratio	Debt-equity ratio	Profit margin (%)	ROE (%)
2000	0,77	0,72	4,39	0,72	2,91
2001	0,80	0,77	4,67	-1,70	-6,51
2002	0,94	0,91	4,16	0,90	3,21
2003	0,92	0,90	3,49	1,70	5,42
2004	0,84	0,82	3,83	3,20	9,35
2005	1,07	1,04	4,87	5,50	22,52
2006	0,95	0,93	3,72	3,60	12,60
2007	0,97	0,94	2,44	7,90	21,47
2007 Apr-Sept	0,92	0,89	2,69	11,00	16,53
2008 Apr-Sept	0,81	0,78	2,77	-0,88	-1,39

The liquidity of BA, according to the current- and quick ratio, has been relatively stable, current ratio fluctuating between 0,77 and 1,07 and quick ratio between 0,72 and 1,04, during the period (see Table 7). As one might intuitively expect, BA shows the highest levels of liquidity for the years with the highest profit margin and ROE (2005 - 2007). One might also suspect that, since fuel price was increasing significantly these years, BA set up a buffer of current assets to use for the increases. Looking at the most recent figures (2008 Apr-Sept), a drop can be observed compared to the same period last year, this is most likely a consequence of the sharp increase in fuel cost.

BA's level of indebtedness, observing their debt-equity ratio, peaked in 2005 (see Table 7) and decreased after that each year until the end of 2007. The increase of indebtedness in 2005, parallel with the increase in liquidity for the same year, might suggest that the sharp rises in fuel costs this year demanded amounts of liquid asset not available within the company. Both disengaging frozen capital and increasing credits, or a combination of the two, could explain the level of liquidity and indebtedness observed. The same explanation could likely be true for the high level of the debt-equity ratio in 2001.

Levels of indebtedness were significantly higher during the earlier years under study. It is possible that this was because BA, after the shocks in 2003, had a positive pattern of profitability and thereby retained the capital for investments or used it to pay off debts, or a combination of both, and in this way the proportion of debt versus equity changed. The latest figures (2008 Apr-Sept) shows a slight increase of indebtedness compared to the same period the previous year (see Table 7). This might also be because of the increase in fuel cost during this year.

As for profitability, BA only had a negative profit margin, in other words experienced a loss, in year 2001. The decrease in sales volume and the increase in cost could explain why that was so. All other years of the period under study, BA showed a positive result (see Table 7). Worth to mention is that, even though the sales volume (RPK) of BA decreased in 2002 too, the airline managed to adjust capacity (ASK) to demand better this year and probably therefore could show a small but still positive profit margin. 2007 was the year with the highest profit margin, 7,90 %. Figures available for 2008 (2008 Apr-Sept) suggest

BA will experience a loss this year, which is not surprising considering the sharp increase in fuel price and drop in sales volume.

Due to the loss in 2001, also the ROE was negative that year. Years 2005-2007 BA show a two-digit positive ROE, with a ROE of 22,52% for 2005 this was the year equity holders saw the highest return (see Table 7). The latest interim report (2008 Apr-Sept) points towards a negative ROE for 2008, which is in line with what the figures for profit margin for the same period show.

4.1.2 Finnair

Finnair was established in 1923 and is thereby one of the world's oldest operating airlines. With a 55,8 % holding, the Finnish government is Finnair's major shareholder.

In 2007 the airline transported around 8,6 million passengers mainly between Europe and Asia, via Helsinki, but Finnair also flies to 14 destinations in Finland. The company has an operating fleet of 63 aircraft and the workforce of the Finnair Group came to 9 500 employees in 2007 (Finnair: Finnair in brief, 2008).

Finnair is a member of the oneworld alliance and in 2006 its two most important route groups were the Far East and Europe (see Figure 6) (AEA: Yearbook 2007).

Scheduled RTK per Region (2006)

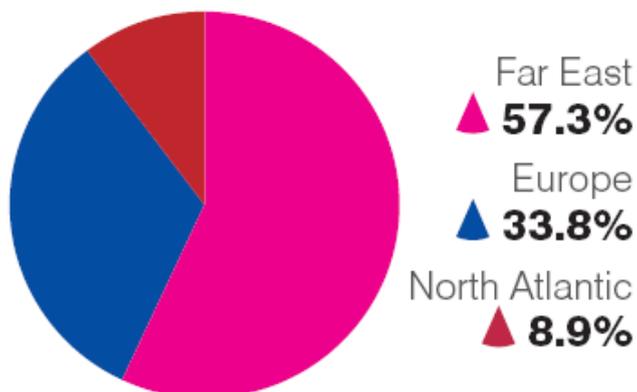


Figure 6. *RTK – Revenue Tonnes Kilometers (both passengers and cargo included) (AEA: Yearbook 2007)

Important events for Finnair during the period of study

(Finnair: Financial Statement 2007)

2007

- Sale of 100 % in FlyNordic.

Table 8. Finnair industry specific ratios

Finnair			
	RPK (million)	ASK (million)	PLF (%)
2000	n/a	n/a	n/a
2001	12 796	18 489	69,2
2002	12 793	17 785	71,9
2003	12 971	18 644	69,6
2004	15 604	21 907	71,2
2005	16 735	23 038	72,6
2006	17 923	23 846	75,2
2007	20 304	26 878	75,5
2007 Jan-Sept	15 171	19 978	75,9
2008 Jan-Sept	16 224	21 702	74,8

Finnair's sales volume, measured by RPK, increased for all years under study but for that of 2002 (see Table 8). The decrease in 2002 was probably mainly due to the traffic losses followed by the terrorist attacks of September 11th. But since the North Atlantic route group, which experienced the largest drop traffic volumes, only constitutes 8,9% of Finnair's all routes, this explains why this decrease in RPK was relatively small. An interesting observation is that even though more than half of Finnair's all routes are scheduled to the Far East, the company still managed to increase its sales volume in 2003. However, it is most unlikely that Finnair was not affected by the SARS phenomenon, but the relatively fast recuperation of the market towards the end of 2003 was perhaps why Finnair show a total increase in RPK. This, and presumably also that Finnair managed well in competing for demand in the other routes in which they operate.

The positive global economic development and the trend of increasing popularity for air travel, explain the steady growth in RPK for Finnair the remaining years (2004-07). The positive trend seems to continue when looking at the latest figures (2008 Jan-Sept), compared to the same period the previous year, probably due to the fact that the Far East market, important to Finnair, is one of the main markets of growth in this period.

The capacity of Finnair measured by ASK has successfully been adjusted to the trend of RPK. The relatively stable level of capacity utilization measured by PLF also shows Finnair's ability to adjust capacity to demand after the sudden shocks. The same positive trend of ASK can also be observed between the latest figure of 2008 (2008 Jan-Sept) and 2007 (2007 Jan-Sept).

Table 9. Finnair cost structure (* - in million €)

Finnair						
	<i>Fuel*</i>	<i>Employees*</i>	<i>Other*</i>	Total cost*	Total cost/RPK*	% change of total cost/RPK
2000	150	453	1023	1626	n/a	
2001	193	483	991	1667	0,1303	
2002	166	492	1000	1658	0,1296	-1%
2003	158	497	966	1621	0,1250	-4%
2004	213	436	1028	1677	0,1075	-14%
2005	293	496	1043	1832	0,1095	2%
2006	385	508	1129	2022	0,1128	3%
2007	440	542	1114	2096	0,1032	-8%
2007 Jan-Sept	398	391	757	1546	0,1019	
2008 Jan-Sept	437	398	859	1694	0,1044	2%

The earlier discussions about how the industry as a whole has experienced increases in cost, in terms of fuel costs and safety enhancements are not fully in line with the total cost per unit sold (per RPK) development of Finnair (see Table 9). Once again, this might be due to the trend of fierce competition in the industry that forces traditional airlines such as Finnair to reduce costs and being more efficient to be able to compete while still being profitable.

When looking at Finnair's development of cost structure, one can observe that the increase in price of crude oil (2004-2008) has led to an increase in the price of jet fuel (see Appendix 2). Fuel cost has not only increased as a part of the total cost but also in total terms.

Table 10. Finnair financial ratios

Finnair						
	Current ratio	Quick ratio	Debt-equity ratio	Profit margin (%)	ROE (%)	
2000	0,99	0,88	2,39	6,30	16,87	
2001	0,84	0,73	2,44	0,40	1,15	
2002	1,20	1,07	2,28	2,00	5,67	
2003	1,13	1,02	2,28	-1,00	-2,63	
2004	1,00	0,92	1,54	1,50	4,33	
2005	1,16	1,09	1,43	3,20	9,11	
2006	0,84	0,78	1,76	-0,65	-2,16	
2007	1,18	1,13	1,17	4,60	10,34	
2007 Jan-Sept	0,83	0,78	1,74	4,50	11,00	
2008 Jan-Sept	0,99	0,94	1,22	0,12	0,20	

Finnair's liquidity, measured in current- and quick ratio, has varied over the period with the current ratio varying between 0,84 and 1,20 and quick ratio between 0,73 and 1,13 (see Ta-

ble 10). A low level of cash and cash equivalents can be observed in 2001, which can be expected considering the crisis that hit the airline industry and led to increased cost.

Finnair increase their liquidity in 2007, this could probably be explained by a distinct increase in profit margin and ROE for the same year. Considering the increase in fuel cost during 2008, it is remarkable that the liquidity in 2008 (interim report Jan-Sept), compared to that of the same interim report from the previous year, increased. A reason for this could involve disengagement of frozen capital in 2008 and that the liquidity at the end of 2007 was quite higher than the figure for September 30th 2007 (2007 Jan-Sept). Compared to the liquidity level at the end of 2007, the figure from September 30th, 2008 shows a decrease. An explanation for the significantly higher level of liquidity in the end of 2007 could be the sale of FlyNordic in the same year, which probably was finalized after September, does therefore not show for the figure in the end of September 2007. This could explain why the figure for 2008 (Jan-Sept 2008) is higher than that of 2007 (Jan-Sept 2007).

Observing Finnair's debt-equity ratio, the level of indebtedness reached a peak in 2001 (see Table 10). This in combination with the decrease in liquidity the same year might have been due to the increase in total cost, in parallel with an overall decrease in demand, which in turn made the airline in need of extra credit. After 2001 the level of Finnair's indebtedness has decreased each year until 2005. The increase in 2006 could have been due to the rise in total cost per RPK, forcing Finnair to use credits to cover these costs. The debt-equity ratio at the end of 2007 was less than half as of that in the end of 2001 which shows that the over all trend of Finnair for the period under study has been a decrease in indebtedness. The latest figures (2008 Jan-Sept) shows a decrease of indebtedness compared to the same period the previous year (see Table 10) but an increase if compared to the level at the end of 2007.

When it comes to Finnair's profitability there have been some remarkable fluctuations during the period. Finnair showed their highest levels of profit margin in 2000 and 2007. As previously discussed 2007 was a good year with strong growth in sales volume for Finnair and the highest level of capacity utilization of the airline for the period under study. It is harder to say why 2000 was a good year, possibly because demand was high for the Far East routes with a strong growth and good outlook for the Chinese economy. For two of the years under study, Finnair experienced a loss (i.e. negative profit margin) (see Table 10). Even if Finnair managed to present a total growth in sales volume (RPK) for the whole of 2003 and total cost per RPK was reduced by 4 %, the high competition for the remaining demand for the Far Eastern routes (reduced by the SARS phenomenon) and the general trend of increased competition on the intra-European routes likely reduced the revenue per unit sold, which resulted in a negative net result. The loss in 2006 could partly be explained by the marginal increase in cost per RPK. The development of revenue per unit sold probably did not match this increase, which, hence, resulted in a negative profit margin. Even though Finnair's profit margin in general was relatively low during the period this is not necessarily bad. Figures available for 2008 (2008 Jan-Sept) shows a significantly lower profit margin compared to the same period last year which probably, also in this case, was due to the strong increase in fuel cost.

Due to the loss in 2003 and 2006, also the ROE was negative these years. Otherwise ROE has been fluctuating heavily during the period, following the development of the profit margin, with the highest figure of 16,87 % in year 2000 (see Table 10). The latest interim report (2008 Jan-Sept) shows, as for the profit margin, a significantly low ROE compared to the same period last year.

4.1.3 Iberia

When Iberia was founded in 1927 it was Spain's first airline. In 1946 Iberia also became the first airline to fly between Europe and South America.

Today Iberia flies to more than 100 destinations in 44 countries all over the world and is Spain's largest air transport group. With the most flights and destinations, Iberia is the leading airline on routes between Europe and Latin America. Iberia has more than 20 000 employees and a fleet comprising of 191 aircraft. In 2007 Iberia served 32,5 million passengers (Iberia: About Iberia, 2008).

Iberia is a member of the oneworld alliance and in 2006 its two most important route groups were Latin America and Europe (see Figure 7) (AEA: Yearbook 2007).

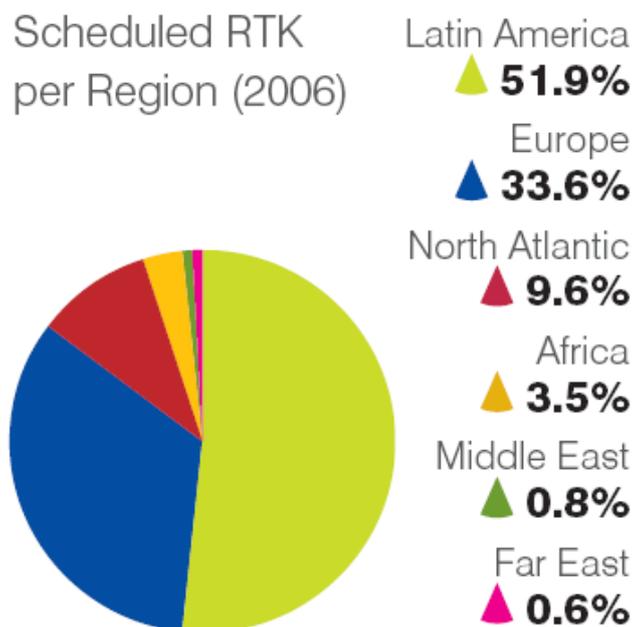


Figure 7. *RTK – Revenue Tonnes Kilometers (both passengers and cargo included) (AEA: Yearbook 2007)

Important events for Iberia during the period of study

(Iberia: Annual Report 2003-2006; Iberia: Interim Management Report January-September 2008, 2008)

2003

- Sale of stake and the brand Viva Tours.

2004

- A Joint Business Agreement (JBA) was signed with BA to establish profit-sharing on two routes.

2006

- Acquisition of stake in a new LCC that will operate point-to-point routes, mainly from Barcelona.

2008

- A Joint Business Agreement (JBA) was signed with American Airlines and BA to improve the customer service.

Table 11. Iberia industry specific ratios

Iberia			
	RPK (million)	ASK (million)	PLF (%)
2000	40 049	54 290	73,8
2001	41 390	58 467	70,8
2002	40 470	55 405	73
2003	42 100	56 145	74,9
2004	45 924	61 058	75,2
2005	49 060	63 628	77,1
2006	52 493	65 802	79,8
2007	54 229	66 454	81,6
2007 Jan-Sept	40 758	49 682	82
2008 Jan-Sept	40 583	50 223	80,8

The sales volume of Iberia, in terms of RPK, increased throughout the years under study, with the exception of year 2002 (see Table 11). The drop in 2002 was for Iberia probably not as much due to the aftermaths of the terrorist attacks of September 11th or the following economic downturn, as by the economic crisis in Argentina in the beginning of 2002. This since the South Atlantic route group is the most important for Iberia. Probably the economic downturn in Europe in 2002 also significantly affected the traffic volumes of Iberia (see Table 11). It seems the airline was not affected significantly by the Iraq War or the SARS outbreak. Possibly the drop in traffic in Europe was the way in which Iberia most experienced the effect of these two events. Figures available for 2008 (Jan-Sept) however, points towards a decrease compared to the same period of the previous year most likely as an effect of the global economic slowdown this period, which has meant an overall decrease in demand.

Iberia's capacity, measured by ASK, has had a similar trend of development as that of Iberia's volume in terms of RPK and looking at their capacity utilization, this measured by PLF, it can be observed that the year with the lowest capacity utilization was in 2001. Possibly, this was due to that Iberia did not manage to adjust capacity fast enough after the shock of the terrorist attacks, which did affect traffic levels in markets, such as the European, important to Iberia. Since then, PLF levels have increased each year (2003-2007). However, figures available for 2008 (Jan-Sept) suggest capacity will increase, which is the opposite movement compared to RPK (sales). This in turn means Iberia will show a lower level of capacity utilization for 2008 compared to the level for the same period 2007 (see Table 11).

Table 12. Iberia cost structure (* - in million €)

Iberia						
	<i>Fuel*</i>	<i>Employees*</i>	<i>Other*</i>	Total cost*	Total cost/RPK*	% change of total cost/RPK
2000	576	1337	2509	4422	0,1104	
2001	634	1361	2738	4733	0,1144	4%
2002	553	1357	2540	4450	0,1100	-4%
2003	557	1403	2499	4459	0,1059	-4%
2004	653	1542	2576	4771	0,1039	-2%
2005	866	1733	2522	5121	0,1044	0%
2006	1178	1421	2735	5334	0,1016	-3%
2007	1145	1445	2729	5319	0,0981	-3%
2007 Jan-Sept	827	1087	2078	3992	0,0979	
2008 Jan-Sept	1201	1010	1930	4141	0,1020	4%

The total cost per unit sold (per RPK) development of Iberia has had a negative trend for almost all years (see Table 12). In 2001 cost per RPK increased and this can likely be explained by the lower level of capacity utilization this year and higher costs due to security enhancements. The decrease for the remaining years (2002-2007) comports with the industry trend of the traditional airlines focusing extensively on cost saving and efficiency improvements to be able to compete with the LCCs in the intra-European market. This was probably very important for Iberia since their second most important route group is the European. The fact that no cost savings can be observed for 2005 might be caused by the rise in fuel price in combination with a depreciation of the Euro against the US Dollar. The figures available for 2008 (Jan-Sept) shows an increase in cost per unit sold compared to the same period last year. The dramatic increase in fuel price during the first half of 2008 is the obvious explanation.

Looking at the development of the cost structure of Iberia one especially notice that the part of total cost derived from fuel cost has increased since 2005 (see Table 12). This is perhaps mainly a cause of the escalating increase in fuel price for these years. The increase in 2008, according to figures available so far (Jan-Sept), indicate that fuel price will this year make up an even larger part of total cost (see Appendix 2).

Table 13. Iberia financial ratios

Iberia					
	Current ratio	Quick ratio	Debt-equity ratio	Profit margin (%)	ROE (%)
2000	1,07	0,99	2,88	4,70	17,5
2001	1,02	0,96	2,96	1,20	4,54
2002	1,34	1,28	2,53	3,40	12,13
2003	1,41	1,36	2,28	3,20	10,18
2004	1,47	1,42	1,85	4,40	12,03
2005	1,66	1,59	2,19	8,30	22,78
2006	1,58	1,49	2,31	1,10	3,26
2007	1,86	1,77	2,00	6,20	6,18
2007 Jan-Sept	n/a	n/a	1,25	5,40	11,11
2008 Jan-Sept	n/a	n/a	1,15	1,20	2,99

Iberia's liquidity, observing the development of the current- and quick ratios, has been constantly increasing during the period of study with the exception of years 2001 and 2006. From 2001 the current ratio of Iberia has almost doubled (see Table 13). As will be discussed below, 2001 and 2006 were the least profitable years for Iberia, with the addition of increased total cost per RPK in 2001, which could explain the low levels of cash and equivalents for these years. Regarding figures for 2008, no data was available for calculations of current- or quick ratios.

The level of indebtedness of Iberia, concerning their debt-equity ratio, declined for three consecutive years, 2002 until 2004, when it reached a low point at 1,85 (see Table 13). The two following years it increased once again to a level of 2,31 at the end of 2006. The increase in 2005 can possibly be explained by the slight increase in cost per RPK and thus a need of more credit to cover these. In 2006 the increase might have been due to the acquisition of a stake in the new LCC. During 2007 Iberia reduced their level of indebtedness again. Figures available for 2008 (Jan-Sept) show an indication of that Iberia will have further reduced their level of debt this year, this compared to the same period of 2007.

The most profitable year for Iberia, both concerning profit margin and ROE, was 2005 with a profit margin of 8,30 % and ROE of 22,78 % (see Table 13). This, even though cost per RPK of Iberia slightly increased this year, might be explained by the stable growth in demand this year and that Iberia thus was able to charge higher fares to compensate for the increase in cost and make a profit. For the years under study, Iberia has not experienced any year of loss (negative profit margin). The lowest level of profit margin was observed for year 2001 and year 2006. The same years (2001 and 2006) were also when equity holders saw the least return on their capital (see Table 13). The affects of the terrorist attacks September 11th 2001, with on overall decrease in demand and increase in cost, can probably explain why this was the case in 2001. Cost per unit of Iberia however decreased in 2006, which means that the same explanation can not be given for this year. Probably also revenue per unit sold decreased and the acquisition of a stake in a new LCC possibly affected the result negatively. So far, numbers for 2008 (Jan-Sept) do not put Iberia with a negative profit margin or ROE for this year, however figures are considerably smaller than for the same period last year.

4.1.4 Lufthansa

In 1926 when Lufthansa was founded under the name Deutsche Luft Hansa Aktiengesellschaft the fleet was comprised of 162 airlines. In 1933 the airline was renamed to Lufthansa (Lufthansa: About us; History, 2008).

The company is today ranked as one of the world's leading airlines and serves 206 destinations in 85 countries. Lufthansa's main route networks are routes to, from and via Europe. In 2007 the airline transported more than 60 million passengers and had a fleet of 513 aircraft. The same year Lufthansa's workforce consisted of 100 799 employees (Lufthansa: About us; Business segments, 2008).

Lufthansa is a member of the Star Alliance and in 2006 its two most important route groups were the Far East and North Atlantic (see Figure 8) (AEA: Yearbook 2007).

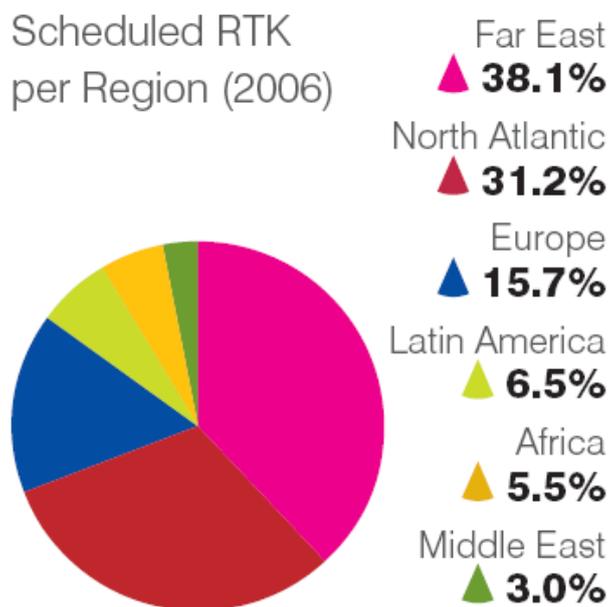


Figure 8. *RTK – Revenue Tonnes Kilometers (both passengers and cargo included) (AEA: Yearbook 2007)

Important events for Lufthansa during the period of study

(Lufthansa: Annual Report 2003-2007, 2004-2007; Lufthansa: 3rd Interim Report January – September 2008, 2008)

2003

- Acquisition of all equity in the Italian regional carrier Air Dolomiti.

2005

- An integration agreement was signed with SWISS.

2007

- Sale of 50 % stake in the leisure travel company Thomas Cook.
- Acquisition of all shares in SWISS.

2008

- Acquisition of 19 % of the shares in US JetBlue Airways Corporation.
- Acquisition of strategic stake in SN Airholding SA/NV, the parent company of Brussels Airlines.

Table 14. Lufthansa industry specific ratios

Lufthansa			
	RPK (million)	ASK (million)	PLF (%)
2000	92 160	123 801	74,4
2001	90 388	126 400	71,5
2002	88 570	119 877	73,9
2003	90 708	124 027	73,1
2004	104 064	140 648	74
2005	108 185	144 182	75
2006	110 330	146 720	75,2
2007	130 893	169 108	77,4
2007 Jan-Sept	98 829	123 226	80,2
2008 Jan-Sept	117 539	147 823	79,5

Lufthansa's sales volume, measured by RPK decreased for two year after 2000, but has since 2003 had a positive trend (see Table 14). The overall traffic losses due to the terrorist attacks of September 11th were probably the reason for this decrease, this since the North Atlantic route group is Lufthansa's second largest. Another reason that also might have caused a decrease in sales volume is the fact that the demand for travel to the Middle East decreased. A third reason that may have contributed to this downturn is the economic crisis in Argentina during 2002 that led to a negative result for the South Atlantic route group.

From 2003 and onwards, a positive trend can be observed, this probably due to the stronger economic development, globally and in important destination markets. Since the Asian market it Lufthansa's primary market, the SARS phenomenon most likely affected the company's traffic volumes on these routes. But a marginal growth in RPK can still be observed, this perhaps due to the recuperating economic development that led to an increase in demand for other routes. The North Atlantic market, which is Lufthansa's second largest market recovered relatively fast after the outbreak of the Iraq war, therefore, Lufthansa was probably not affected more than marginally by this shock.

A combination of the appreciation in the exchange rate of the Euro against the US Dollar, the positive global economic development and the general industry trend of increased

interest for air travel were most likely the reasons for the steady growth in RPK for the remaining years (2004-07). Due to the fact that the Far East is one of the main developing markets, a positive trend seems to continue when looking at the latest figures (2008 Jan-Sept) compared to the same period the previous year.

The capacity of Lufthansa measured by ASK has been adjusted to the trend of RPK except for the year 2001, when RPK decreased and ASK increased. Lufthansa was in other words not able to adjust capacity to demand following the sudden shock of the terrorist attacks of September 11th. However, for the remaining years the same positive trend can be observed, and this is also true for the latest figures of 2008 (2008 Jan-Sept) and 2007 (2007 Jan-Sept). This can also be observed by the relative stable level of capacity utilization measured by PLF.

Table 15. Lufthansa cost structure (* - in million €)

Lufthansa						
	<i>Fuel*</i>	<i>Employees*</i>	<i>Other*</i>	Total cost*	Total cost/RPK*	% change of total cost/RPK
2000	1499	3625	10278	15402	0,1671	
2001	1621	4481	12401	18503	0,2047	22%
2002	1347	4660	11490	17497	0,1975	-3%
2003	1352	4612	11897	17861	0,1969	0%
2004	1819	4813	11217	17849	0,1715	-13%
2005	2662	4853	11503	19018	0,1758	2%
2006	3355	5029	11938	20322	0,1842	5%
2007	3860	5498	13166	22524	0,1721	-7%
2007 Jan-Sept	2757	3963	9583	16303	0,1650	
2008 Jan-Sept	4105	4225	10541	18871	0,1606	-3%

A significant increase in total cost per unit sold (per RPK) can be observed for 2001 (see Table 15). As for the development of total cost per unit of Lufthansa this does not comport with the fact that the industry experienced increases in costs such as cost of fuel and for safety enhancements. But once again, as discussed previously, the trend of increased competition in the industry, especially from LCCs, has forced traditional airlines to reduce cost and being more efficient to be able to compete successfully.

The fuel cost has increased both in total terms and as the part of the total cost, as can be seen when looking at the development of Lufthansa's cost structure. An even stronger development of the actual fuel cost can be observed in 2005, this probably as a result of the depreciation of the Euro against the US Dollar.

Table 16. Lufthansa financial ratios

Lufthansa					
	Current ratio	Quick ratio	Debt-equity ratio	Profit margin (%)	ROE (%)
2000	0,82	0,77	2,60	4,50	16,68
2001	0,62	0,57	4,20	-3,60	-17,28
2002	0,97	0,91	3,64	4,30	17,5
2003	0,96	0,89	5,30	-6,10	-36,86
2004	1,16	1,09	3,50	2,40	10,16
2005	1,00	0,94	3,26	3,40	13,53
2006	0,97	0,90	2,97	4,50	18,29
2007	1,00	0,93	2,23	7,80	25,51
2007 Jan-Sept	1,09	1,04	2,48	10,00	25,21
2008 Jan-Sept	0,91	0,85	2,29	3,00	8,07

The liquidity of Lufthansa, according to the current- and quick ratio, has been fluctuating over the period. The lowest level of cash and equivalents available was in year 2001 (see Table 16). Decreasing levels, compared to the previous year, can be observed for all of the years in which total cost per unit sold increased. The highest level of liquidity can be observed in 2004, which also was the year when cost per RPK decreased the most. Looking at the most recent figures (2008 Jan-Sept) a drop can be observed compared to the same period last year, this does not comport with what was previously discussed about the level of liquidity decreasing when total cost per RPK increases, which decreased during the first three months of 2008. However, cost in total terms, especially fuel cost, increased significantly for the same period, thus increasing the need for cash or equivalents to pay these. This may explain the drop in liquidity.

Lufthansa's level of indebtedness, observing their debt-equity ratio, peaked in 2001 and 2003 (see Table 16). The highest level was in 2003 when, for each €1 of equity capital Lufthansa had €5,30 of debt capital. It is interesting to observe that the highest levels of indebtedness coincide with the lowest levels of profit margin, i.e. the years when Lufthansa experienced a loss. An explanation might be that the airline these years needed new credit to make restructurings and reorganizations to adjust their operations to the change in the industry. After 2003 the debt-equity ratio of Lufthansa decreased each year until the end of 2007 and also the latest figures (2008 Jan-Sept) shows a slight decrease of indebtedness compared to the same period the previous year (see Table 16).

Lufthansa had a negative profit margin in both 2001 and 2003, in other words experienced a loss, and due to the losses also the ROE was negative these years. Neither figure is surprising considering the shocks that hit the industry these years, both significantly affecting the route groups most important to Lufthansa, North Atlantic and Far East. Even though sales volumes showed a slight growth in 2003 in total, this might have been in on less profitable routes and possibly fares were dropped on their Far Eastern routes in 2003 to be able to compete for the remaining demand. This would of course also have affected profitability. All other years of the period under study Lufthansa showed a positive result (see Table 16). The year with the highest profit margin was 2007 with a figure of 7,80 %. This might be due to that Lufthansa managed to reduce total cost per unit sold this year (possibly by

managing to increase capacity utilization to the highest level out of the years under study), in combination with the strong increase in sales volume, mostly triggered by the increased demand for routes to the Far East. Figures available for 2008 (2008 Jan-Sept) show a positive number, but still relatively low compared to the same period the previous year.

During the entire period investigated Lufthansa show a two-digit ROE with the highest level of return to the equity holders of 25,51 % in 2007 and the lowest -36,86 % in 2003 (see Table 16). The latest interim report (2008 Jan-Sept) shows a fairly low figure compared to the same period the previous year.

4.1.5 EasyJet

EasyJet was started in 1995 by Sir Stelios Haji-Ioannou. Today the airline has operating bases throughout the UK and mainland Europe (EasyJet: About us; Company overview, 2008).

EasyJet had in 2007 a network comprising of 289 routes across Europe and northern Africa and 77 airports in that network. The company's fleet consisted of 137 aircraft in 2007, and had during the same year 37 200 passengers. EasyJet's workforce consisted of 5 674 employees in 2007 (Easyjet: Annual reports and accounts 2007, 2007).

Important events for EasyJet during the period of study

(EasyJet: Annual Report and Accounts 2002, 2002; EasyJet: Preliminary results for the year to 30 September 2008, 2008)

2002

- Acquisition of Go Fly Ltd.

2008

- Acquisition of GB Airways Ltd.

Table 17. EasyJet industry specific ratios

EasyJet			
	RPK (million)	ASK (million)	PLF (%)
2000	4 730	5 801	80,8
2001	5 903	7 003	83
2002	9 218	10 769	84,8
2003	17 735	21 024	84,1
2004	21 566	25 448	84,5
2005	27 448	32 141	85,2
2006	31 621	37 088	84,8
2007	36 976	43 501	83,7
2008	47 690	55 687	84,1

EasyJet's sales volume, in terms of RPK, increased for all years of the period under study (see Table 17). In 2003 sales volume almost doubled at 17 735 million compared to 9 218 for year 2002 which could be a result of the acquisition of Go Fly Ltd. This strong development is in line with the discussion about that the LCCs as an industry segment has developed dramatically during the period under study. The expansion of EasyJet's organization and operations is probably what foremost can explain the continued strong growth in traffic volumes during the period. This can also be observed when looking at ASK that have been adjusted to follow the same increasing trend as RPK for all years under study.

The reasons that EasyJet does not present figures that indicate that they have been affected by the general changes in the macroeconomic environment and the sudden shocks that have hit the airline industry are various. For example, one reason that the traffic volumes of EasyJet do not show decreasing figures in 2001 after the terrorist attacks of September 11th is because they only operate on the European market. The same holds for the shocks of the SARS phenomenon and the Iraq War. Another reason is that the increasing prices following the shocks in the airline industry made the price sensitive consumers switch to LCCs. The number of business travellers have also decreased, at the same time as the number of travellers in general have increased, this have resulted in an increase in sales volumes for EasyJet, since today's price sensitive consumer have more alternative and therefore often prefers the cheapest alternative.

In terms of capacity utilization, EasyJet have had a relatively stable level of PLF, varying between 83 and 85,2 % for all years under study but year 2000.

Table 18. EasyJet cost structure (* - in million £. ** - in 2008 no information on specified employee cost was available, therefore it is assumed this cost is included in the 'other cost' column).

EasyJet						
	<i>Fuel*</i>	<i>Employees*</i>	<i>Other*</i>	Total cost*	Total cost/RPK*	% change of total cost/RPK
2000	38	37	128	203	0,0429	
2001	47	52	177	276	0,0468	9%
2002	55	69	295	419	0,0455	-3%
2003	121	116	513	750	0,0423	-7%
2004	147	135	620	902	0,0418	-1%
2005	260	153	720	1133	0,0413	-1%
2006	388	182	771	1341	0,0424	3%
2007	426	231	842	1499	0,0405	-4%
2008	709	**	1405	2114	0,0443	9%

The development of total cost per unit sold of EasyJet, has followed a negative trend for almost all years under study (see Table 18). However in 2001 and 2008 a significant increase in total cost per unit can be observed. When looking at the development of fuel cost, it has not only increased as a part of the total cost but also in total terms, very likely due to the increase in fuel price of the market.

Table 19. EasyJet financial ratios

EasyJet					
	Current ratio	Quick ratio	Debt-equity ratio	Profit margin (%)	ROE (%)
2000	0,65	n/a	2,93	8,40	33,63
2001	2,57	n/a	0,59	11,00	11,98
2002	2,01	n/a	0,42	8,90	6,73
2003	1,83	n/a	0,43	3,50	4,27
2004	2,18	n/a	0,60	3,80	5,21
2005	2,25	n/a	0,80	3,20	5,07
2006	2,11	n/a	1,23	5,80	9,57
2007	1,88	n/a	1,18	8,50	13,22
2008	1,55	n/a	1,42	3,50	6,51

The liquidity of EasyJet can only be shown by one of the two liquidity ratios, the current ratio. Information about inventories was not presented in the airline's annual reports and for that reason the quick ratio can not be calculated. The current ratio, however, shows that, at least for five of the years under study, EasyJet had current assets that more than twice could cover their current liabilities (see Table 19). The lowest level of liquidity was observed for year 2000 and the highest level was observed for 2001. The latter was the year in which EasyJet showed its greatest level of profit margin, which thus can explain the strong liquidity. This in spite of the increase in total cost per unit sold for the same year. Since EasyJet end their fiscal year September 30th, the latest available figures are from their annual report for 2008. These show a decrease in the level of liquidity compared to that of 2007, most certainly an effect of the dramatic increase in fuel price and thus in total cost per unit sold (see Table 18).

Considering EasyJet's level of indebtedness, their debt-equity ratio has varied relatively much during the years under study. The highest value could be observed for year 2000 and the lowest value of the debt-equity ratio is found for 2002, just slightly increasing in 2003. This might be explained by the strong expansion in 2001 and 2002, probably financed by equity capital and retained earnings from previous years. Figures for 2008 (see Table 19) shows that EasyJet's level of indebtedness increased this year compared to the level of 2007, this might be due to the fast increase in fuel price which shows in the increase of the total cost per RPK variable of EasyJet in 2008.

EasyJet exhibit positive profit margin for all of the years under study. Profitability, in terms of this ratio, was the highest in the three first years of the period under study (2000-02) and in 2007. This was probably due to the combined effect of growth of the LCC segment's overall market share, the overall industry trend of increased travelling and the expansion of EasyJet's organization and operations, which shows clearly in the traffic volume development of EasyJet for these years. The lowest level of profit margin was presented in 2005 (see Table 19). This was not a level significantly lower than that of the two previous years and an explanation for the lower profitability these years could be explained by how the traditional airlines had worked hard on making restructurings to be able to compete with the LCCs. For 2008 the level was significantly smaller than the previous year, which could be explained by, also this, by the increase in total cost per RPK of EasyJet and the only marginal growth in capacity utilization.

Equity holders saw the highest level of return, measured by the ROE ratio, in year 2000. That this ratio shows such high profitability this year, compared to the profit margin ratio (which shows its highest level in 2001), could be explained by the high level of indebtedness in 2000. That is, net result relative to equity was higher in 2000 because less of the capital consisted of equity. For 2008, the ROE was less than half compared to the one of 2007, which comports with the earlier discussion about why profitability was lower this year.

4.1.6 Ryanair

Ryanair was established in 1985 by the Ryan family. The share capital at that time was just £ 1 and they had a workforce of 25 employees. At the beginning Ryanair only had one route, operating daily from Waterford in the southeast of Ireland to London Gatwick.

Ryanair has always been and still is Europe's largest low fare carrier. At this moment the company transports 51 million passengers on 688 low fare routes across 26 European countries. Ryanair has 31 bases in Europe and operates a fleet of 163 new aircraft. The company has a new order for 99 more aircraft that is planned to be delivered over the next five years. Ryanair's current workforce consists of 5000 employees, comprising over 25 different nationalities (Ryanair: About us – History of Ryanair, 2008).

Important events for Ryanair during the period of study

(Ryanair: Annual Report & Financial Statements 2004, 2004)

2003

- Acquisition of Buzz from KLM.

Table 20. Ryanair industry specific ratios

Ryanair			
	RPM (million)	ASM (million)	PLF (%)
2000	3 118	4 439	77
2001	4 505	6 081	81
2002	6 781	8 744	85
2003	10 425	13 996	81
2004	14 917	17 812	84
2005	20 342	24 282	83
2006	26 943	32 043	82
2007	34 452	41 342	82
2007 Apr-Sept	n/a	n/a	86
2008 Apr-Sept	n/a	n/a	85

Ryanair's sales volume, in terms of RPM increased for all years of the period under study. The figure of 2000 is almost 12 times as large as that of 2007 (see Table 20). This comports with the trend in the industry of expansion of the LCC segment of the industry and its attractiveness for increasingly price aware consumers. The capacity of Ryanair, measured by ASM has also increased for all years under study, indicating that the airline has made extensive investments in expansion of its operations. Since Ryanair only operates on intra-European routes, the shocks of e.g. the terrorist attacks of September 11 and SARS most likely did not affect their traffic volumes that much.

As for Ryanair's capacity utilization a relatively stable fluctuation of PLF can be observed, figures varying between 81 and 85 % for all years under study excluding year 2000. For the most recent interim report (2008 Apr-Sept) and the one for the same period the previous year (2007 Apr-Sept) no figures on RPM and ASM are available.

Table 21. Ryanair cost structure (* - in million €)

Ryanair						
	<i>Fuel*</i>	<i>Employees*</i>	<i>Other*</i>	Total cost*	Total cost/RPM*	% change of total cost/RPM
2000	63	61	249	373	0,1196	
2001	104	78	279	461	0,1023	-14%
2002	129	93	357	579	0,0854	-17%
2003	175	124	527	826	0,0792	-7%
2004	265	142	571	978	0,0656	-17%
2005	462	171	684	1317	0,0647	-1%
2006	693	226	845	1764	0,0655	1%
2007	791	285	1100	2176	0,0632	-4%
2007 Apr-Sept	393	146	554	1093	n/a	
2008 Apr-Sept	788	160	652	1600	n/a	n/a

The development of total cost per unit sold (per RPM) of Ryanair shows a downward sloping trend until 2004. After that the development is more stable. The trend of the first years can possibly be a sign of Ryanair experiencing economy of scale followed by the growth of their organization. However, this development is surprising when observing how the increase in oil price in the market clearly has affected the cost structure of Ryanair. Over all, the part of total cost made up by fuel cost has increased during the period under study, from 17 % in 2000 to 36 % in 2007. The figures available for 2008 (Apr-Sept) indicate this development will continue (see Table 21).

Table 22. Ryanair financial ratios

Ryanair						
	Current ratio	Quick ratio	Debt-equity ratio	Profit margin (%)	ROE (%)	
2000	3,28	3,20	0,91	21,00	15,60	
2001	3,04	2,99	0,89	24,00	15,00	
2002	2,96	2,89	0,99	28,00	19,28	
2003	2,71	2,65	1,02	19,00	14,20	
2004	2,55	2,54	1,20	21,00	16,15	
2005	2,43	2,42	1,33	18,00	15,40	
2006	2,03	2,02	1,27	19,00	17,15	
2007	1,54	1,53	1,53	14,00	15,61	
2007 Apr-Sept	2,00	1,99	1,46	26,00	18,80	
2008 Apr-Sept	1,82	1,81	1,29	12,00	7,94	

The liquidity of Ryanair, measured by the current- and quick ratio, had a strong but decreasing trend all through the period under study (see Table 22). The high levels of cash and equivalents comports with the high levels of profitability for the same period. The decreasing trend could possibly be indicating that Ryanair have used an increasing amount of current assets, leaving a smaller buffer, to make investments related to their expansions. Latest available figures (2008 Apr-Sept), show that the trend follows in to 2008 with a drop in liquidity when compared to the same period the previous year. From year 2004 and up till the most recent figures (2008 Apr-Sept), just a minimal difference could be observed between the quick- and current ratio, pointing towards that Ryanair from 2004 hardly kept any inventory according to their annual accounts.

Ryanair's level of indebtedness has increased for all years of the period under study but one, year 2006. This might be another sign, apart from the trend of decrease in levels of liquidity, of the continued, powerful expansion of Ryanair's organization and operations. There are probably other reasons as well that could explain the overall increase in the level of debt, e.g. tax benefits. The figures presented in the interim report of 2008 (Apr-Sept) indicate a decrease in the debt-equity ratio of Ryanair, when compared to the interim report of 2007 (see Table 22). Since the level of indebtedness did continue to increase, it might be a sign to that Ryanair has decided to slow down their expansion, which would be in line with the negative outlook for the development of demand.

For all of the years of the period under study, Ryanair reported a profit (see Table 22). This can likely, as discussed before, be explained by the combined effect of growth of the LCC segment's overall market share, the general industry trend of increased air travelling and the expansion of Ryanair, which shows clearly in the traffic volume development of the airline for these years. Ryanair's profit margin was for all years a two-digit one, with a peak in 2002. This peak might be explained by a combined effect of an increase in sales volume and a major decrease in cost per unit (partly due to increased levels of PLF).

The lowest profit margin of Ryanair was observed in 2007. However, it should be highlighted that, even though this was the lowest profit margin, it was still one of 14 % (see Table 22). A decrease in the level of profitability can not be considered surprising when one

keeps in mind that, as a response to the increase of the LCCs' market share, the traditional airlines have implemented a multitude of cost saving- and efficiency measures to be able to better compete on the intra-European routes. Further, a significant drop in profit margin can be observed when comparing the figure from the end of 2007 with that of the interim report of the same year (Apr-Sept). This downward trend, of the last two quarters of 2007 fiscal year, continues when looking at the figures from the interim report of 2008 (Apr-Sept). These latest available figures show a noteworthy decrease in profit margin compared to the same period the previous year, which might be due to the increase in cost for this period, which for Ryanair only can be presented in total terms since information about RPM is not available.

Equity holders saw the highest level of return, measured by ROE, in 2002 (see Table 22). This comports with what has already been discussed about the profitability of Ryanair this year. Most recent figures (2008 Apr-Sept), point towards a single digit ROE for 2008.

4.2 Comparative analysis of the different airlines

Below will be found graphs demonstrating the development of the ratios and factors for all airlines under study. A distinction is made between the two different groups, traditional airlines and LCCs. For each group and ratio, a mean has been calculated. The graphs are followed by comparative analysis in accordance with the three-levelled observational scheme developed.

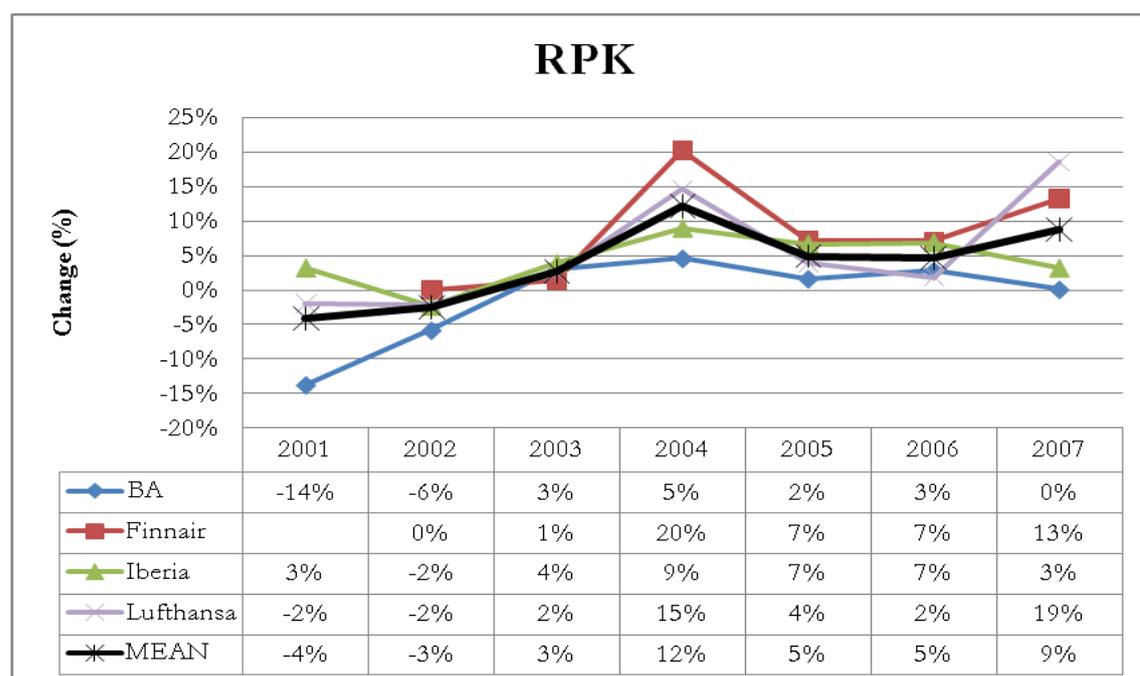


Figure 9. Development of RPK (% change) - traditional airlines (data for Finnair was not presented in their 2001 annual report and is therefore missing)

As mentioned earlier about the crisis in late 2001, airlines in general had to increase prices on fares as a consequence of the higher costs associated with the new, more extensive safety routines. One would assume that the enhancement in security did not only make travelling more complicated, but that customers probably also were discouraged from fly-

ing in general and naturally consumer confidence shrunk after the terrorist attack due to the following downturn in the world economy. All of these factors contributed to that the industry overall experienced a drop in sales volume. This comports with the empirical findings of this thesis (see Figure 9). All of the traditional airlines experienced a decrease in sales volume, either showing already in the annual report of fiscal year 2001 or in that of 2002. Since BA end their fiscal year the 31st of March, this impact showed to a larger extent in their annual report, including figures until end of March 2002, compared to the other traditional airlines which end their fiscal year 31st of December.

A slight recovery in sales volume can be observed in 2003 for all traditional airlines in this study. As discussed earlier the recovery was limited by the war in Iraq and the SARS outbreak. A stronger improvement can be observed in 2004. Most so for Finnair and Lufthansa, the airlines included in this study with the largest parts of their respective operations devoted to the Far East route group. The growth in 2005 and 2006 shows a similar trend for all traditional airlines under study, steady but not strong. In 2007 a stronger development in sales volume is seen for two of the traditional airlines; Lufthansa and Finnair. This can most likely be explained by the importance of the Far East route group for these carriers, as mentioned above, and the strong increase in demand for travel to and from this emerging market.

For the figures available for 2008 so far (interim reports from end of September) (see table of each airline), Lufthansa and Finnair still show a strong growth, still as an effect of the positive development of the Far East route group, while for BA and Iberia a slight decrease in RPK can be observed. This decrease could possibly be explained by the economic slowdown, in the US market foremost, but also increasingly in the European market.

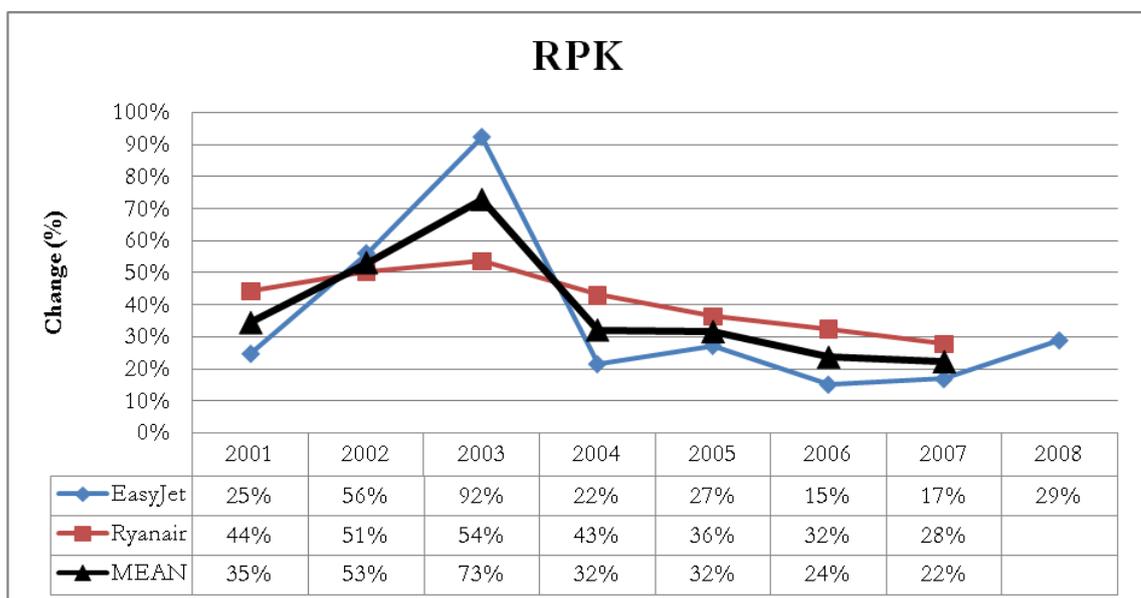


Figure 10. Development of RPK (% change) - LCC

When looking at the sales volume for the LCCs for the same period one can conclude the previous discussion does not seem to hold for them as a group (see Figure 10). This can probably be explained by the ongoing expansion of the LCC segment in the European market. Also, customers sensitive to price increases in fares would assumingly, if finding traditional airlines' fares too high, instead choose to travel with a LCC such as Ryanair or

EasyJet. The LCCs had in this situation a competitive advantage and most likely managed to attract customers from the traditional airlines. Since only dedicating their operations to intra-European traffic, the LCCs were not exposed to the consequences of the terrorist attacks in 2001 or the Iraq War and SARS in 2003 to the same extent as the traditional airlines. To be controversial one could say that the LCCs benefited from the crises 2001 – 2003, since this were the years of the study for which both Ryanair and EasyJet showed the strongest growth in sales volume.

From 2004 to 2007 both Ryanair and EasyJet have experienced a slowdown in the trend of RPK development, however both still presenting much stronger figures than those of the traditional airlines.

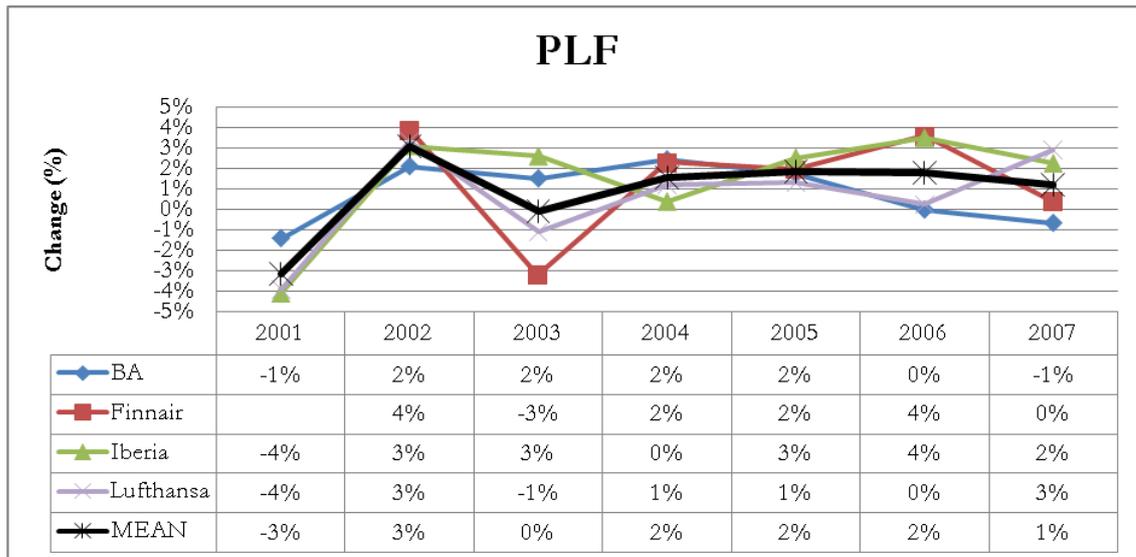


Figure 11. Development of PLF (% change) – traditional airlines (data for Finnair was not presented in their 2001 annual report and is therefore missing).

As can be observed by looking at the capacity utilization of the traditional airlines they all show a decrease in PLF for 2001 (see Figure 11). This was probably due to the sudden drop in traffic volumes caused by the terrorist attacks and that the airlines did not manage to fully adjust capacity to match the decrease in demand. All airlines, however, were more successful in adjusting their capacity to demand in 2002, which shows by the increase in PLF. Finnair and Lufthansa, as previously discussed, experienced the consequences of the SARS impact in 2003 as they failed to adjust capacity fast enough to match the traffic losses. The overall trend for the years 2004-07 exhibit a continued slight improvement of capacity utilization. This might be due to the general industry trend that the traditional airlines are trying hard to compete with the LCCs. Improving capacity utilization is one of the ways they can cut unit cost and thus afford to cut fares to match and compete with the LCCs.

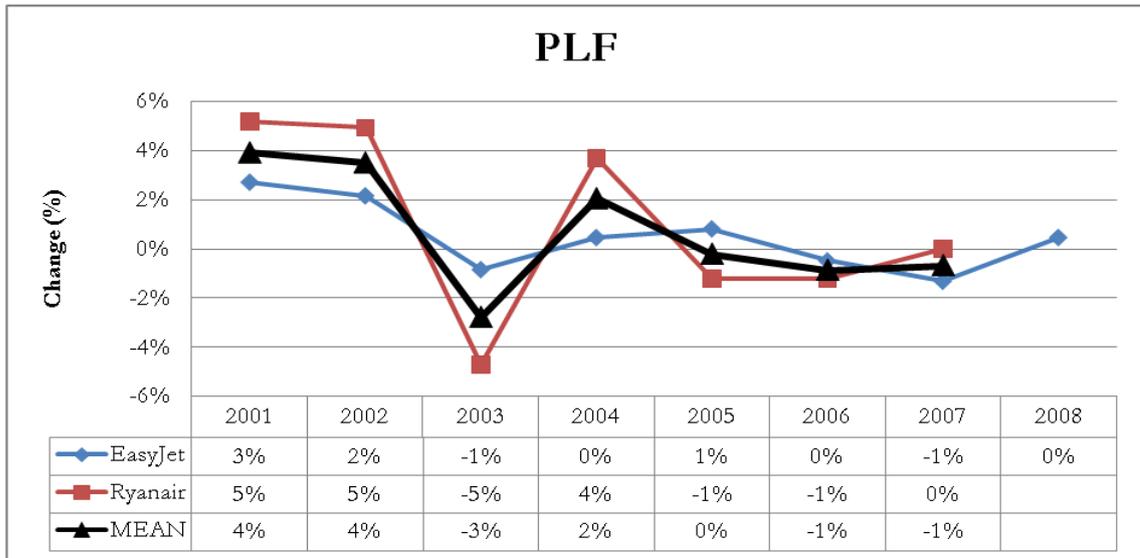


Figure 12. Development of PLF (% change) – LCC

The capacity utilization for the LCCs has been relatively stable for all years under study, even though the figures for 2001 and 2002 have increased slightly more compared to the rest of the years under study. The increase in capacity utilization these years could be explained by the in parallel sharp growth in sales volume. What seems to be a drop in PLF in 2003 (see Figure 12) might therefore in reality just have been a readjustment to ‘normal’ levels of capacity utilization. In general, LCCs show significantly higher levels of PLF than do traditional airlines. However, this is part of the LCCs strategy to be able to keep down fares and therefore they are dependant on maximizing PLF.

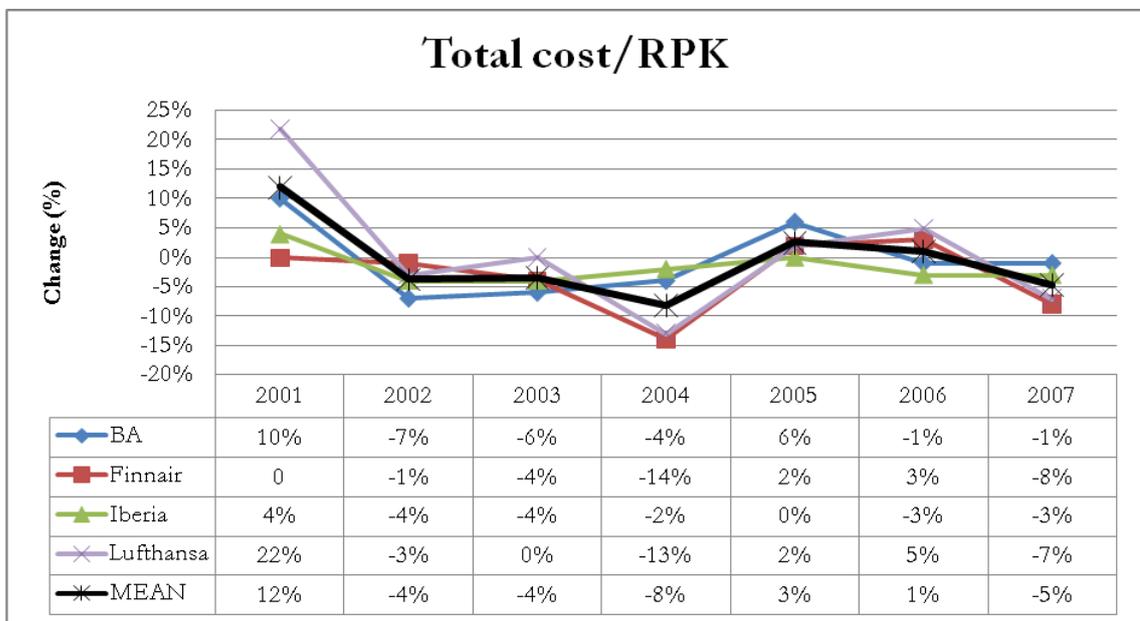


Figure 13. Development of total cost/RPK (% change) – traditional airlines (RPK for Finnair was not presented in their 2001 annual report and is therefore missing)

All traditional airlines showed an increase in total cost per unit sold in 2001. This comports with the discussion about how the airlines had an increase in costs due to security enhancements followed by the terrorist attacks of September 11th. In general, total cost per RPK has decreased during the years under study. The exception is, besides 2001, 2005 (see Figure 13). The increase in fuel price combined with the appreciation of the US Dollar against the Euro, made fuel cost increase even more.

One might, intuitively, have expected that total cost per unit sold would have increased, especially since various pungent increases in costs have previously been pointed out. This is, nevertheless, not the case, rather the opposite holds true. The overall trend of decreasing cost might be due to the general industry trend that the traditional airlines are trying hard to compete with the LCCs. Decreasing cost per unit sold is a major part of the approach to be able to cut fares to match and compete with these.

Even if the increase in fuel price does not show in the development of total cost per unit sold, the part of total cost that fuel cost make up has in total increased considerably, in particular in the most recent years (see Appendix 2).

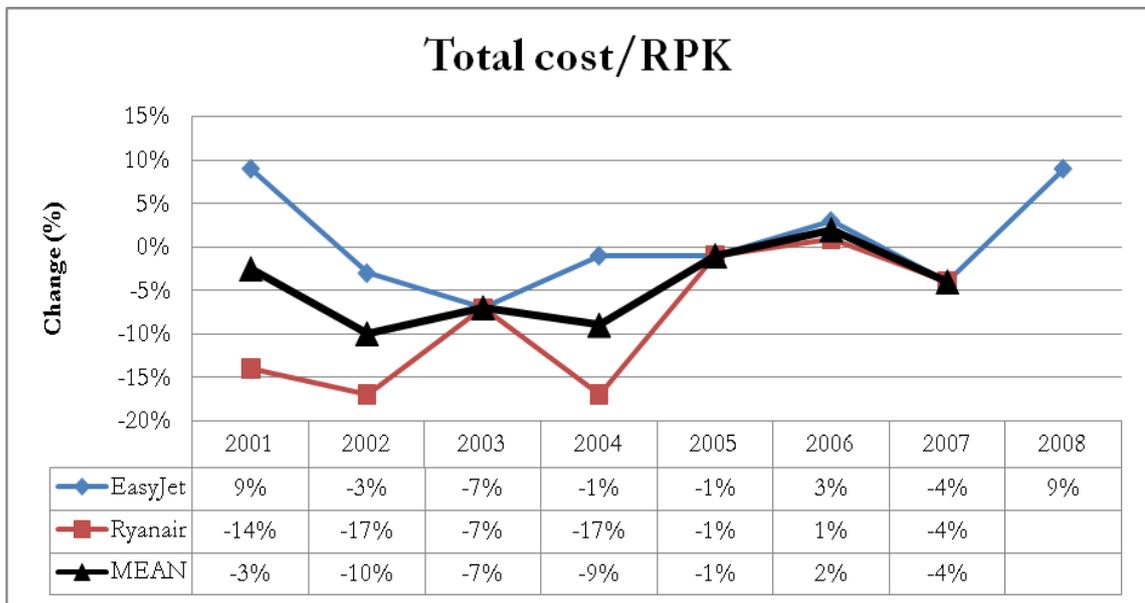


Figure 14. Development of total cost/ RPK (% change) – LCC

A first observation is how the LCCs, Ryanair in particular, have been able to decrease cost per unit sold in all years but 2006 (see Figure 14). This considering the increases in costs that they can not influence, in combination with the fact that the strategy of the LCCs is already from the start to keep costs low in order to be able to offer low fares and still be profitable. Since both LCCs have been expanding their organizations and operations heavily during the period under study. The expansions might have caused the decrease in cost per RPK due to economies of scale.

Overall, as for the traditional airlines, fuel cost has increased both in total terms and as a part of total costs (see Appendix 3). This comports with the market escalation of fuel price.

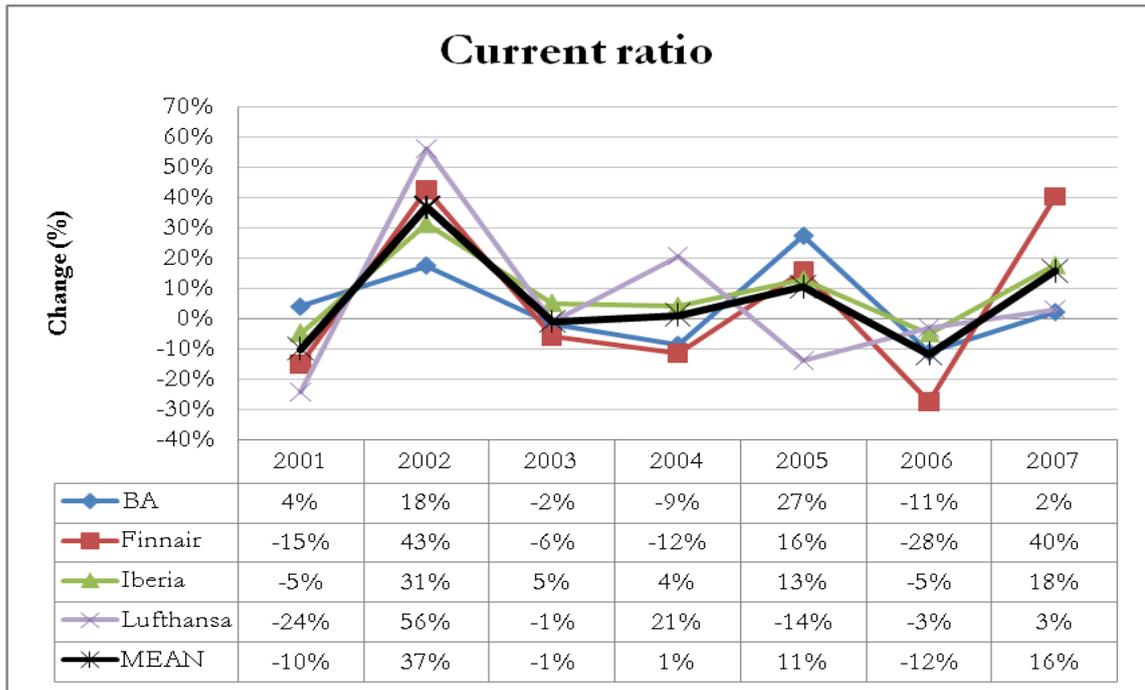


Figure 15. Development of current ratio (% change) – traditional airlines

The liquidity, measured by current ratio, decreased in 2001 for all traditional airlines included in this study but for one (see Figure 15). The decrease was probably caused by the increases in cost per unit sold, which in turn was a consequence of lower levels of capacity utilization, when failing to adjust capacity to demand after the shock, and of cost increases, due to the safety enhancements after the terrorist attacks.

The increase in liquidity in 2002 for all of the traditional airlines under study might be explained by that the airlines in general felt, after what happened the previous year, a need to increase the levels of available current assets, hence set up a buffer, in the case of another extraordinary event affecting the industry. To achieve this higher level, since no sign of increases in indebtedness can be observed – rather the opposite, the airlines possibly disengaged frozen capital. Also, all traditional airlines under study showed a decrease in cost per unit sold, positive for liquidity since cash and equivalents are usually used to pay these.

No clear explanation can be found for the strong decrease in liquidity of the traditional airlines in 2006. None of the aspects studied indicate something extraordinary that might explain this development, e.g. the development of total cost per unit sold only showed an on average 1% increase (see Figure 15).

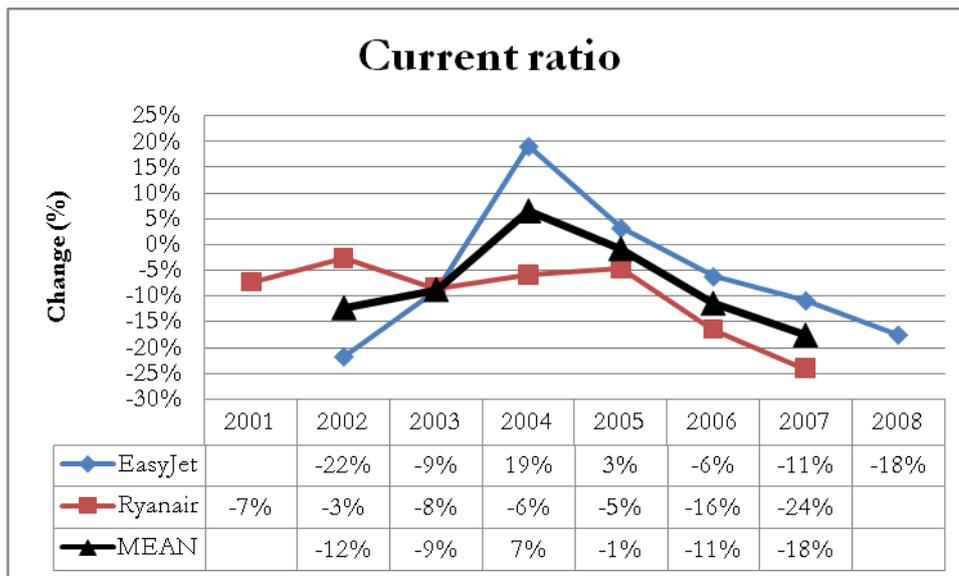


Figure 16. Development of current ratio (% change) – LCC

First of all, the development of the current ratio of EasyJet in 2001 was excluded from the graph (see Figure 16). This since it was significantly higher than other values and thus disturbed the scale. The value was an increase of 295 % (0,65 to 2,57).

When comparing the two LCCs included in this study, in terms of current ratio development, both have experienced a general drop in liquidity levels for the period as a whole and they showed a very similar trend of development for the years 2005-2007. The strong escalation of the fuel price which started in 2005 and continued until mid 2008, thus increasing fuel cost for the airlines, might explain the decrease in liquidity levels during this period.

For the earlier years under study, the LCCs present very different developments of liquidity. From the aspects studied in this thesis, no clear explanation can be found for why that is. One might have expected that for the years with increases in profit margin levels that liquidity would have increased, and the other way around. However, signs of this type of connection do not show in the empirical findings for the LCCs.

Worth to mention is that, for the years studied, the LCCs in general, show significantly higher levels of liquidity than do the traditional airlines included in the study. This might be due to the significantly higher levels of profitability of the LCCs during the period. The observation of an overall decrease in liquidity levels for the LCCs for the period as a whole, might, with this in mind, only show that the LCCs were finding ways to better use the high levels of current assets. Maybe current assets were used as means to realize investments in connection with the ongoing expansions of the LCCs.

Both LCCs show a further decrease in liquidity in the figures available for 2008 (end of September 2008). This is most likely due to the strong increases in fuel price this year. The increase in total cost per RPK of EasyJet for 2008 verifies this theory.

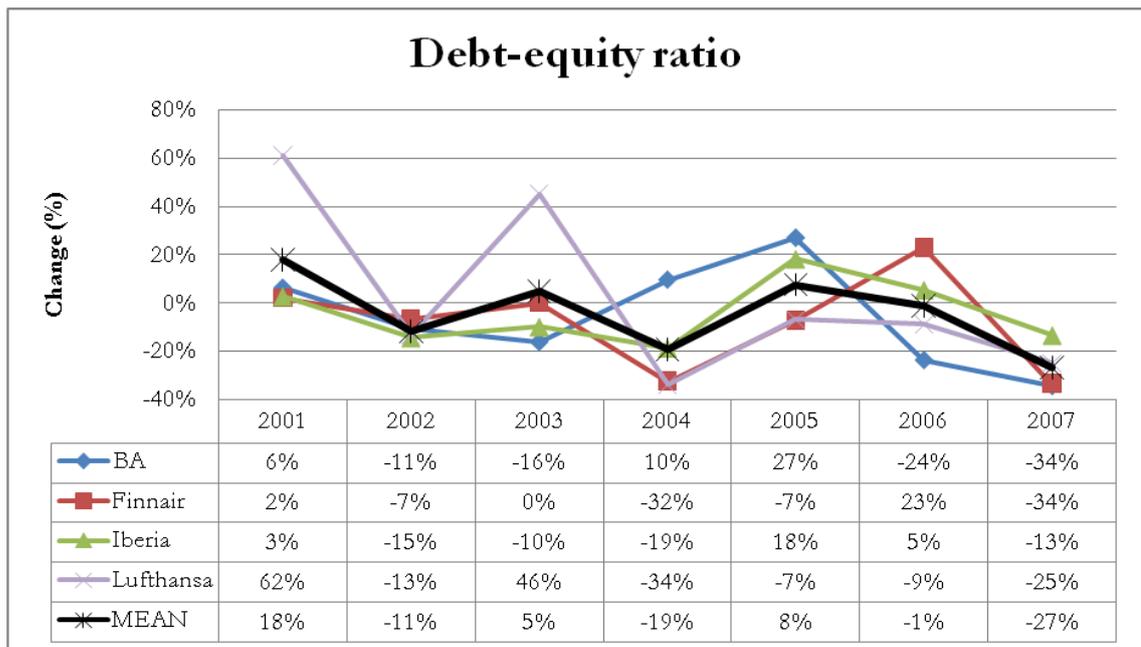


Figure 17. Development of debt-equity ratio (% change) – traditional airlines

Year 2001 was the only year under study in which all of the traditional airlines increased their respective level of indebtedness, in terms of debt-equity ratio (see Figure 17). The explanation, discussed several times previously, was most likely the effects of the terrorist attacks of increased cost. The following year all of the traditional airlines showed a decrease in indebtedness, which might be explained by a slight recuperation and possibly payment of credit. BA and Iberia, not as dependent on developments of traffic on the Far Eastern routes, managed to lower their respective level of indebtedness further in 2003. An explanation for why Lufthansa showed a high increase in their debt-equity ratio might be, apart from losses due to events affecting the Far Eastern routes, that they made an acquisition during the year, probably financed by mainly by debt (since the level of liquidity only showed a 1 % decrease compared to the previous year).

In 2004, all traditional airlines included in the study, with the exception of BA, further decreased their levels of indebtedness significantly. This probably due to the in general decrease in total cost per RPK and positive levels of profit margin.

All traditional airlines of the study, showed a decrease of indebtedness in 2007, probably as a result of higher levels of profitability, increasing the proportion of equity of total assets, and decreases in total cost per unit sold, decreasing short term credits.

The figures available for 2008 (from end of September), points towards a slight decrease of level of indebtedness for all of the traditional airlines, except for BA which exhibit an increase compared to last year.

This might be due to the fact that they start their fiscal year in the beginning of April, thus their figures reflects better the negative development of the industry, escalating throughout the year. And even though still not presenting higher levels of indebtedness, all traditional airlines but Lufthansa showed an increase in total cost per unit sold and decreasing levels of profit margin compared to the same period the previous year.

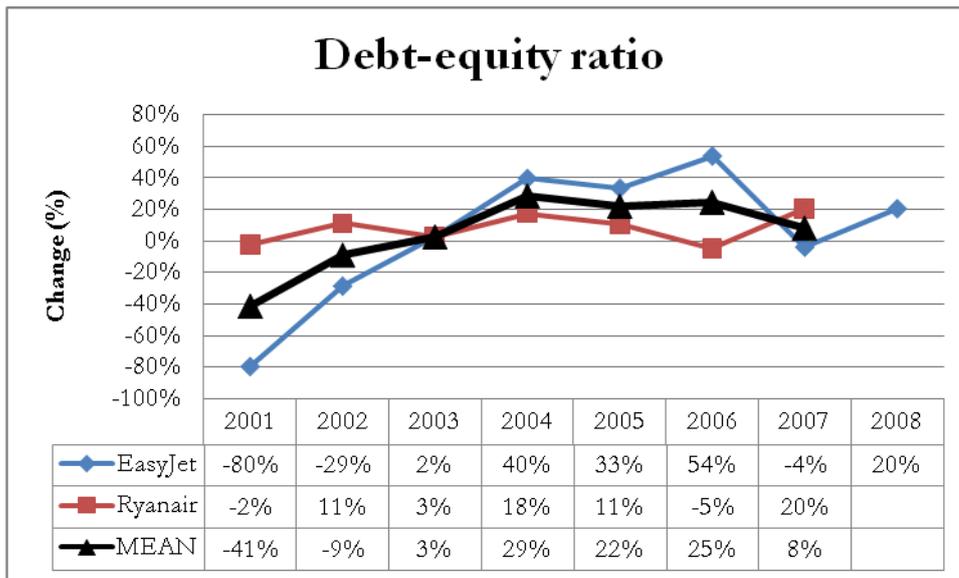


Figure 18. Development of debt-equity ratio (% change) – LCC

The LCCs have shown great fluctuations in their levels of indebtedness, especially EasyJet (see Figure 18). This might be explained by the increase in debt it usually implies to make large investments when expanding one's operations. As discussed previously about the levels of liquidity of the LCCs, it is probable that retained earnings have been used for financing expansions as well. This since such high levels of profit margin has been observed for most of the years under study. Ryanair overall show a more steady development, which might be explained by that the two LCCs are in different stages of their respective business cycle.

When looking at the different years under study, both LCCs showed a decrease in indebtedness for 2001, EasyJet most so. If one accounts for the difference in the fiscal year of the two LCCs, one can see a drop in indebtedness for both of them in two periods. Late 2000 continuing in to early 2002 and in late 2006 early 2007.

As an overall trend has been an increase in indebtedness levels, this, as previously discussed might be for several reasons, e.g. expansion demanding large investments and reasons for why a higher level of indebtedness might be desired, such as tax benefits.

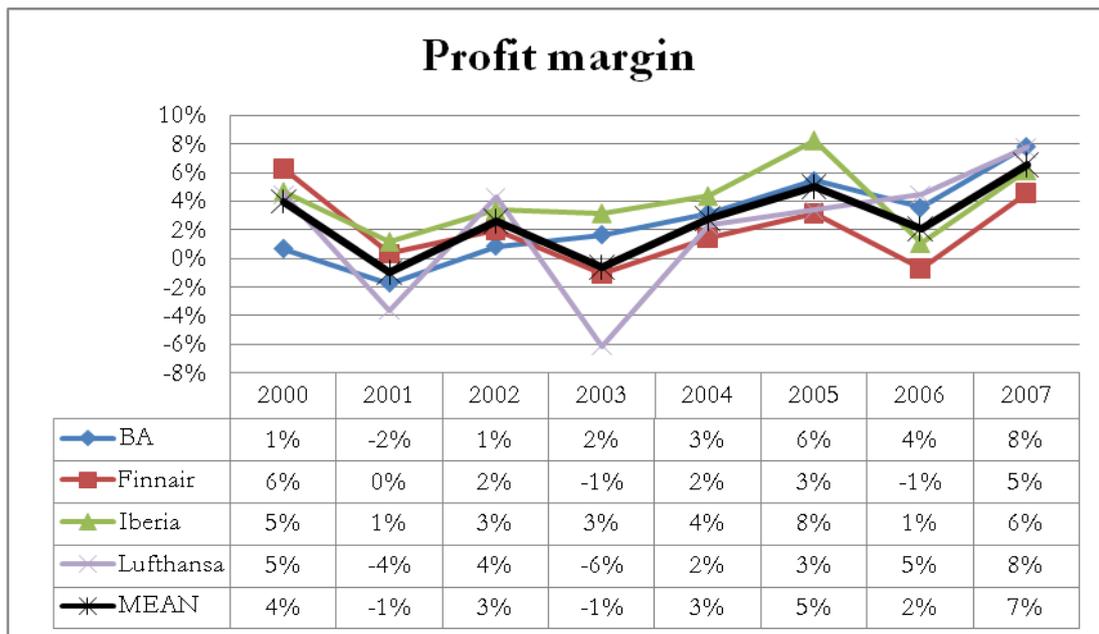


Figure 19. Development of profit margin – traditional airlines

The decrease in sales volume for the traditional airlines and the increased cost could explain why on average the traditional airlines included in this study showed a low profit margin in 2001 compared to the other years included in the period of study. Lufthansa were the ones that experienced the largest loss for fiscal year 2001, after them BA (see Figure 19). This was likely the case since these two are the airlines included in the study that are most dependent on the North Atlantic route groups, in terms of how their operations are distributed among different geographical route groups. In terms of cost per unit sold, BA and Lufthansa were the airlines in the study that had the highest increases in total cost per RPK in 2001, which also strengthens this statement. An interesting observation is that all of the airlines included in the study showed a positive development, in terms of profit margin, the following year (2002) suggesting they all recovered relatively fast from the shock of the terrorist attacks September 11th.

In 2003, two of the traditional airlines in this study showed a loss, i.e. a negative profit margin. These were Lufthansa and Finnair, which both devote a large part of their operations to the Far East routes. This was probably why these two showed a negative result in 2003 as a consequence of the SARS phenomenon. They both experience a drop in capacity utilization this year and, even though both show a slight increase in sales volumes and no significant increase in cost per RPK (rather a decrease in the case of Finnair), neither of them managed to make a profit this year.

The growth in 2004 and 2005 shows a similar trend for all traditional airlines under study, steady but not strong (see Figure 19). This could be explained by that these were years of recuperating growth in traffic volumes, in particular for Finnair and Lufthansa. The decrease in total cost per unit sold for all traditional airlines in the study in 2004 most likely contributed to the positive result this year.

There is no clear explanation for the low and negative profit margins of the traditional airlines in this study experienced in 2006. None of the aspects studied indicate something ex-

traordinary that might explain this development. The industry trend of strong competition might be one explanation.

In 2007, all traditional airlines included in the study show an increase in profitability compared to the previous year. This could be explained by the fact that they managed to decrease total cost per RPK, showed stable levels of capacity utilization and in general a growth in sales volume.

For 2008 (interim reports from end of September), exhibit weak profit margins for all traditional airlines included in this study. This might be the consequence of an in general increase in total cost per unit sold, probably caused by the dramatic increase in fuel price.

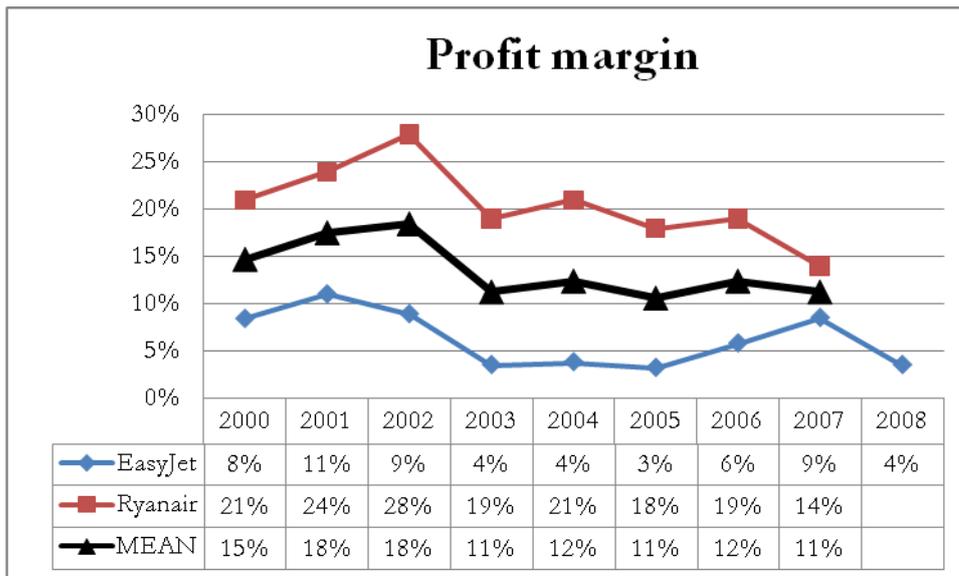


Figure 20. Development of profit margin – LCC

Both of the LCCs included in this study show a positive profit margin for all years, Ryanair even two-digit ones throughout the period under study (see Figure 20). A combination of three reasons might explain this. Firstly, there has been a strong growth of the total LCC segment's market share on the intra-European market. Secondly, there has been an overall growth in the number of travellers throughout the period. And thirdly, both LCCs included in the study have expanded their organizations and operations.

The highest levels of profitability for the LCCs can be observed in the early years of the study. As can be observed above, these are the years in which the LCCs showed the highest levels of growth in sales volumes, possibly benefitting from the tough situation for the traditional airlines they would normally compete with. With their low fares, they also had a competitive advantage in attracting the price sensitive consumer, even more so during the economic slowdown that followed the terrorist attacks.

In 2007 Easyjet show a level of profitability comparable to their levels in the beginning of the period under study. For Ryanair however, this was the year were they showed their lowest figure of profitability. One should be careful to interpret this as something negative for Ryanair, since they still showed a positive profit margin of 14 %.

Both LCCs show a lower, but still positive, level of profitability for 2008, this probably caused by the increase in total cost per RPK caused by the sharp increase in fuel price.

4.3 Analysts' viewpoints on the current crisis and the future outlook for the industry

4.3.1 Chris Tarry – Aviation Industry Research and Analysis (CTAIRA)

In the statements made by aviation analyst Chris Tarry, in an “Analyst viewpoint” for IATA in late July 2008, he discussed the ongoing crisis and the future prospects for the industry.

Tarry underlines that what will impact all airlines is the future development of fuel prices and the economical problems faced by the operating environments. Since there exist many different opinions and it is very uncertain what future fuel prices will likely be, Tarry says it is hard to predict how this important cost will affect the industry in the future. The uncertainty of these two important factors makes it difficult to make a sure prediction about how long the crisis will last (Tarry, 2008).

Tarry calls the situation today an unprecedented period for the airline industry and stresses how this is a important moment for the airline industry in which the focus should be on how this period of challenge for the management of airlines will shape the shape the future structure of the industry (Tarry, 2008).

The fuel price will according to Tarry affect all airlines, but the economic slowdown and prospect of recession facing the operating environment in Europe will impact the demand for both leisure and business travel. In Europe, he underlines, there already existed a significant excess capacity and all over the world there is a threat of inflation which would further reduce travel demand. The current crisis is far from only a consequence of the increase in fuel price. The industry seems to be facing a structural change in terms of cost structure and concurrently a demand squeeze (Tarry, 2008).

Focus of attention should be given to the way and ability of different airline managements to adjust to the situation in the market today and to the expected future environment of the industry (Tarry, 2008).

He says that even if generalizations are risky to make, typical problems facing airlines could be summed up to: the issue of the current and future fuel price; the issue of managing cash efficiently will generating more. Also, for some airlines, the actions taken in order to make sure the company will stay alive (Tarry, 2008).

Tarry explains that in the airline industry cash is, as always, “king”. All airlines need to reduce unnecessary costs and conserve the cash they have. This since there will be an increased demand for cash, as a consequence of the higher costs, and the weaker demand and fares will make it more difficult to generate cash (Tarry, 2008).

According to Tarry, another important factor important to consider is the future delivery schedules of manufacturers, in other words the ability of airlines to cover pre-delivery payments (Tarry, 2008).

Referring to earlier events in the aviation industry Tarry reflects over how in the about 25 years that he has been following the aviation industry there have been a multitude of incidents interrupting and affecting the performance of the industry but probably no event like the current one (Tarry, 2008).

Although high oil prices have caused crises in the industry before, the speed at which the oil price increased this time became a problem since the increase in cost could not be covered fast enough, this due to the fact that a large proportion of airline revenue is pre-sold. Prices on fares could not be adjusted fast enough to cover the additional costs (Tarry, 2008).

A significant difference from the last downturn is that the manufacturing cycle was then kept going by the increasing demand from a number of LCCs, which then were able to acquire aircraft at what were reported to be very attractive prices, giving them a cost advantage. Tarry adds that in the situation today it is hard to see where the new net orders will emerge from (Tarry, 2008).

According to Tarry, it is easy to conclude that there is an ample difference in financial strength among airlines just by taking a brief look at publicly available financial reports. He says, how much cash a company will want to have is an easy question to answer; more (Tarry, 2008).

Tarry points out that other observable factors that will likely have a bearing on the survival or failure of an airline are; commitments to future capital expenditure and pre-delivery payments; the level of the breakeven load factor (breakeven PLF); the traffic mix and to a high degree to which the airline is relying on leisure travel (Tarry, 2008).

In order to achieve a satisfactory return the industry as a whole already needed to decrease capacity significantly before the crisis, says Tarry. Capacity is now being reduced, mainly driven by the cost reduction and avoidance of cash outflows. In theory less capacity gives an opportunity to increase revenue through higher fare levels, however this is dependent on the existence of sufficient demand (Tarry, 2008).

Some of the LCCs may get opportunities to enter new markets if others in the sector fail, Tarry explains. Most probably this will not be through acquiring failing companies, but rather by redeploying part of the own capacity and the degree to which the brand is already established in the new market will be crucial for success (Tarry, 2008).

4.3.2 Anders Lidman

Anders Lidman, owner and CEO of Aeropol – a consulting firm within the airline industry, says that the question about for how long today's crisis in the airline industry will last is impossible for anyone to answer. However, 2009 is believed to be the worst year in the history of the airline industry with numerous bankruptcies. Lidman also explains that today's crisis is about much more than just fuel prices, he says that the industry was already in great suffering before the large increase in oil prices (A. Lidman, personal communication, 2008-12-03).

Lidman explains that there is a huge uncertainty about civil traditional airline's viability in an open market economy. All American network airlines have experienced a Chapter 11 form of bankruptcy (reconstruction) in different rounds. Without this procedure of reconstruction all major airlines in the U.S. would have been subjects to a Chapter 7 form of bankruptcy (filing for bankruptcy) (A. Lidman, personal communication, 2008-12-03).

To cope with the financial distress in the airline industry, large consolidations are currently a large matter, mostly in Europe and in the U.S but also in between, Lidman says. These consolidations mainly occur within the three largest alliances; Star, Oneworld and Skypartner. Lidman continues that the largest change will occur in connection to already obtained and upcoming "anti trust" approvals from the U.S. and the European Union. Lidman ex-

plains that these will allow a total coordination of prices and conditions, which creates a whole new dimension. The single largest event for the airline industry world wide is when British Airways and American Airlines after one year of waiting will receive their anti-cartel immunity (A. Lidman, personal communication, 2008-12-03).

Only the future will tell how these alliances develop to confront the future difficulties that await the industry, Lidman says. Consequences such as a decrease in supply, especially in the U.S. and within the European Union where the LCCs will spread on the point-to-point side. Lidman believes that the charter will decrease next year, but still with the profitability in control. Like today, the Scandinavian market for TUI and Thomson will continue to be the leading (A. Lidman, personal communication, 2008-12-03).

Lidman says that the crisis of today does not have any similarities with earlier crisis in the industry. He metaphorically explains that the crisis of today can be compared to a cancer disease where no one knows how it is going to end, while earlier crisis can be compared to fractured leg. If a person has a lot of cash and equivalents, he or she will survive, whereas if a person breaks a leg in the jungle, this could mean the end (A. Lidman, personal communication, 2008-12-03).

In the case of today no one is safe, especially not if revenues and coverings continue to drop as they have so far, Lidman concludes (A. Lidman, personal communication, 2008-12-03).

4.3.3 Helen Jakobsson

Helen Jakobsson who works at the Senior Research and Investigation Officer Market Analysis Section at the Swedish Civil Aviation Authority (Luftfartsstyrelsen) says that it is very hard to define in which stage of the airline industry crisis we are, since it is related to which stage the recession is in. She claims that different analysts have different views (H. Jakobsson, personal communication, 2008-12-03).

Jakobsson states that the airline industry crisis is closely related to the general business cycle - in a boom the demand for travel is high and in a recession the demand is low. She also states that the oil prices effects the airlines since oil is a crucial component in their cost masses - high oil prices give high costs. A boom and with that the high demand for energy the last years in combination with a weak dollar have driven up the oil prices which in turn have caused trouble for the airlines. The financial turbulence has also made it more difficult for the airlines to finance purchases and leasing of aircraft (H. Jakobsson, personal communication, 2008-12-03).

The future for the airline industry is decided by the business cycle, fuel prices, environmental policies and how the infrastructural policies are proposed in the long-run. Jakobsson believes we will see many alliances and bankruptcies among many different types of airlines (H. Jakobsson, personal communication, 2008-12-03).

4.3.4 Comparative analysis of the analysts' viewpoints

All three analysts have consistent opinions about the present situation in the airline industry, saying that it is impossible to say in which stage of the airline industry crisis we are and for how long this crisis is predicted to last. Tarry adds that this is due to the fact that the industry is dependent on the future development of fuel prices and the economical problems faced by the operating environment, which are two uncertain and important factors.

Lidman and Tarry also both explain that the situation of today is an unprecedented period for the airline industry and that the crisis of today does not have any similarities with earlier crises in the industry. They also have consistent opinions about that the current crisis is far from only a consequence of the increase in fuel price and that the industry was already in great suffering before the large increase in oil prices. Terry says that over the past 25 years there have been a large number of incidents affecting the performance of the industry but still no one like this current event. He also points out that this is a period of challenge for the management of the airlines, and that this affects the future shape and structure of the industry.

One important factor and something that is vital for all airlines that all three analysts point out, is that all airlines need to change their cost structure by reducing unnecessary costs and conserving the cash they have. Since oil is a crucial component in the airlines' cost masses, the increase in oil price affect the airlines immensely and therefore it is necessary to cut other costs to survive. Tarry also explains that there will be an increase in demand for cash as an effect of increasing costs in general, and a decrease in demand and fares will make it more difficult to generate cash. Tarry points out other factors that will have an impact on the survival of an airline, such as commitments to future capital expenditure and pre-delivery payments, the level of the breakeven load factor (breakeven PLF), the traffic mix and to a high degree to which the airline is relying on leisure travel.

Both Lidman and Jakobsson believes that we will see many alliances in the future and Lidman says that these consolidations will mainly occur within the three largest alliances; Star, Oneworld and Skypartner. Alliances allow a total coordination of prices and conditions and this type of collaboration will most certainly allow for cost savings.

According to Tarry, typical problems facing the airlines could be; the issue of the current and future fuel price, the issue of managing cash efficiently will generate more and also the actions taken in order to make sure the company will stay alive.

To sum up, in the case of today, no one is safe and only the future will tell how the airlines will confront the future difficulties that await the industry.

5 Conclusion

In this final chapter conclusions are drawn from the study and the drawbacks of these are discussed. Finally, further studies which could be made in the future are suggested.

To remind the reader, the purpose of this thesis it is here once again stated:

The purpose of this thesis was to investigate how industry change has affected the profitability and capital structure of European airlines, individually and in comparison with each other.

That the airline industry is highly affected by the fact that we live in an increasingly globalized world becomes obvious when events in one part of the world are proven to affect airlines from an entirely different. There exists ambiguities in the empirical findings of this study, which is expected considering the complexity of the industry and the multitude of factors that have affected the development of the European airline industry and its actors the period under study. This made it difficult to draw any certain conclusions.

However, for the three financial aspects studied, liquidity, indebtedness and profitability, significant patterns were observed that could be explained by the changes in the European airline industry.

In terms of profitability of the traditional airlines, all of these included in the study showed a low profit margin in 2001, most likely due to the aftermaths of the terrorist attacks of September 11th. Also, the two of the airlines with significant part of their operations devoted to the Far East, also showed a drop in profitability for the years when the SARS phenomenon drastically decreased demand for these routes. The overall pattern for the traditional airlines' profitability, is a slow growth level since 2001. The industry trend, since deregulation, of increased competition, could explain why profitability was not better. In particular since overall demand clearly increased and all of the traditional airlines in the study showed an overall strong trend of decreases in total cost per unit sold.

As for the LCCs' profit margin development, this comports with the industry trend of an overall growth of the LCC segment's market share, the trend of an overall increase in demand for air travel and with the strong expansion of the individual LCCs' operations. The LCCs also showed developments in profitability for 2001-2002 which indicate that they were affected by the terrorist attacks and the aftermaths. However, the LCCs were affected 'positively' by the event, meaning that in the economic slowdown followed by the events the LCC took exploited their competitive advantage of lower fares to attract the increasingly price sensitive customers from the traditional airlines. The levels of profitability shown by the LCCs in the later years under study are lower than those from the earlier years. However, these "lower levels" are still higher than those the traditional airlines were showing for these years. This could be explained by the overall industry trend of the traditional airlines starting to adopt a strategy more similar to that of the LCCs and better being able to compete, shown by decreases in per unit cost from these even when prices in general increased, which indicate they were implementing cost saving measures.

The patterns for the development of level of indebtedness can not as clearly be related to the industry change, this for neither of the groups. The traditional airlines as a group overall decreased their level of indebtedness through the period, this with a few individual exceptions certain years. The overall decrease could indicate that the traditional airlines were gaining strength in the competition with the LCCs affecting their profitability as discussed above and thus reducing the need for credit. All traditional airlines increased their debt-

equity ratio in 2001, very likely a consequence of increase in costs for security after the terrorist attacks this year.

The LCCs as a group show an opposite trend and overall increase in the level of indebtedness, which could be explained by the need for capital for their expansion plans.

Explanations for how levels of liquidity were affected by the changes and events in the industry were harder to find. The strongest empirical findings indicating affects of the changes and events discussed, was that, for the traditional airlines, the level of liquidity dropped in 2001. This was very likely due to the increases in costs and losses caused by the aftermaths of the shock that hit the industry this year.

The LCCs showed a very similar development of the level of liquidity for the last years of the study. A decreasing trend probably caused by the significant increases in fuel prices in these years.

The three industry analyst agree on the fact that it is impossible to determine in what stage the crisis of today and two of them say the crisis of today is of a dimension not earlier experienced by the industry, which makes it impossible to compare to earlier crises.

To survive in this situation, one important factor and something that is vital for all airlines that all three analysts point out, is that all airlines need to change their cost structure by reducing unnecessary costs and conserving the cash they have.

According to the analysts, the trend of alliances will continue to be able to enhance efficiency further and the industry will be highly dependent on the future development of fuel prices.

5.1 Critique

This thesis has some reliability issues that one should be aware of.

Firstly, as mentioned earlier, generalizability is not something that can taken for granted from analysis of the empirical findings. This since six European airlines can not be considered as representative for the European airline industry as a whole.

Throughout the analysis of this thesis many assumptions have been made. It has, in some cases been difficult to understand and find relevant explanations to why some figures behave the way they do. This might be due to lack of more detailed information concerning e.g. acquisitions of new airlines and/or of new aircraft and how these have affected the airlines financially. There is also lacking information regarding restructurings and expansions of the airlines' organization and operations.

Due to the fact that it is impossible to say in what phase of the crisis the airline industry is in and for how long today's crisis will last makes it more difficult to investigate the total impact of it. It is however, already possible to see some trends.

5.2 Further research

There are several suggestions for further research that could be interesting to perform.

Firstly, one could extend the number of airlines and maybe perform a statistical study to be able to generalize and hence increase reliability. This perhaps by comparing several num-

bers of airlines in the European airline industry to a similar number of airlines in the American airline industry. However, a problem with this could be to find sufficient amount of data.

Secondly, one could study the airline industry for a longer period of time to be able to include other crisis and developments. This to perhaps investigate if a pattern can be observed between the most recent crisis and the historical crisis that have hit the airline industry. Again, sufficient amount of historical data could be difficult to find.

Thirdly, the sample could be narrowed down to perhaps two airlines and thereby investigate those in more in depth. This to be able to include more detailed and specific information from the airlines.

References

- AEA. (2000 – 2007). *AEA Yearbook 2000 – 2007* [pdf-publications]. (Available from <http://www.aea.be/press/publications/index.html>)
- AEA. (2008, October 22). *European Air line traffic in August/ September* [press release]. (Available from www.aea.be)
- AEA. (2008, May 29). *State of the industry* [ppt-presentation]. (Available from http://files.aea.be/RIG/Economics/DL/SI_2008Maypub.pdf)
- AEA. (2008). *About Us – AEA's Role*. Retrieved 2008-12-03 from <http://www.aea.be/about/role/index.html>
- AEA. (2008, November 20). *AEA meeting with AEA meeting with Czech government, policy makers and industry in Prague* [pdf-presentation]. (Available from: <http://www.aea.be/press/speeches/index.html>).
- Aeropol. (2008). *Background and education*. Retrieved 2008-12-19, from <http://www.aeropol.se/>
- Air Transport World. (2008, December). Financial results, new deals, and reports from every corner of the globe. *Air Transport World*, 45, 9.
- Balcaen, S., & Ooghe, H. (2006). 35 years of studies on business failure: an overview of the classic statistical methodologies and their related problems. *The British Accounting Review*, 2006 (38), 63-93.
- Bergfelt, C. (2008, October 30). *Fler bolag kommer att gå under i år*. Retrieved 2008-11-01, from <http://www.aftonbladet.se/resa/flyg/article3656030.ab>
- British Airways. (2008). *About us; corporate profile*. Retrieved 2008-11-26, from <http://www.bashares.com/phoenix.zhtml?c=69499&p=irol-homeprofile>.
- British Airways. (2008). *About us; Student Kit; Factbook 2006*. Retrieved 2008-11-26, from <http://www.bashares.com/phoenix.zhtml?c=69499&p=irol-studentkit>
- British Airways. (2001 – 2005). *Report & Accounts 2000/01 – 2004/05* [pdf-publications]. (Available from <http://www.bashares.com/phoenix.zhtml?c=69499&p=irol-reportsannual>)
- British Airways. (2006 - 2008). *Report and Accounts for the year ending 31 March 2006 - 2008* [pdf-publications]. (Available from <http://www.bashares.com/phoenix.zhtml?c=69499&p=irol-reportsannual>)
- British Airways. (2007 - 2008). *Interim Management Report, first half 2007/08 – 2008/09* [pdf-publications]. (Available from <http://www.bashares.com/phoenix.zhtml?c=69499&p=irol-reportsother>)

- Bryman, A. and Bell, E. (2007). *Business research methods, 2nd edition*. Oxford: Oxford University Press.
- Carlson, M. (2004). *Att arbeta med företagsanalys* (6th ed.). Malmö: Liber.
- EasyJet. (2008). *About us; Company overview*. Retrieved 2008-11-26, from <http://www.easyjet.com/EN/About/Information/index.html>
- EasyJet. (2000). *easyJet plc – Directors' report and consolidated financial statements* [pdf-publication]. (Available from http://www.easyjet.com/EN/Investor/investorrelations_financialreports.html)
- EasyJet. (2001 - 2007). *easyJet plc – Annual Report and Accounts 2001- 2007* [pdf-publications]. (Available from http://www.easyjet.com/EN/Investor/investorrelations_financialreports.html)
- EasyJet. (2008). *easyJet plc – Preliminary results for the year to 30 September 2008* [pdf-publication]. (Available from http://www.easyjet.com/en/Investor/investorrelations_introduction.html)
- Finnair. (2008). *Finnair in brief*. Retrieved 2008-11-26, from http://www.finnairgroup.com/group/group_1.html
- Finnair. (2001 - 2005). *Finnair Group Results for the Financial Year April 1 – December 31 2000 - 2004* [pdf-publications]. (Available from http://www.finnairgroup.com/group/group_12_3.html)
- Finnair. (2006 - 2008). *Financial Statement 2006 - 2007* [pdf-publications]. (Available from http://www.finnairgroup.com/group/group_12_3.html)
- Finnair. (2007 – 2008). *Interim Report January 1 – September 30 2007 – 2008* [pdf-publications]. (Available from http://www.finnairgroup.com/group/group_12_3.html)
- Hickman, M., & Prosser, D. (2008, September 19). *Warning: 30 airlines will go bust this year*. The Independent. Retrieved 2008-10-22, from <http://www.independent.co.uk/travel/news-and-advice/warning-30-airlines-will-go-bust-this-year-928774.html>
- IATA. (2008, September 3). *Financial forecast – Significant losses continue into 2009* [pdf-publication]. (Available from <http://www.iata.org/whatwedo/economics/index.htm>)
- IATA. (2002, July 15). *World Air Transport Statistics 2002 Is Out Now* [press release]. (Available from <http://www.iata.org/pressroom/pr/2002-07-15-27.htm>)
- IATA. (2008). *About us*. Retrieved 2008-11-20 from <http://www.iata.org/about>
- IATA. (2008, November 27). *Airlines Financial Health Monitor* [pdf-publication]. (Available from <http://www.iata.org/whatwedo/economics/index.htm>)

- IATA. (2008). *Chris Tarry – CTAIR*. Retrieved 2008-12-19, from http://www.iata.org/events/agm/2008/speakers/tarry_chris.htm
- IATA. (2008, November 27). *Airlines Financial Health Monitor* [pdf-publication]. (Available from <http://www.iata.org/whatwedo/economics/index.htm>)
- Iberia. (2008). *About Iberia*. Retrieved 2008-11-26, from <http://grupo.iberia.es/portal/site/grupoiberia/menuitem.d5e959cc6e59ed9239bf93ead21061ca/>
- Iberia. (2001 - 2006). *Iberia – Annual Report 2000 - 2005* [pdf-publication]. (Available from http://grupo.iberia.es/portal/site/grupoiberia/template.PAGE/menuitem.1ea770f3a6b0e3be19736c10d21061ca/?ano_visible_recogido=Anteriores)
- Iberia. (2007). *Iberia – Annual Report 2006* [pdf-publication]. (Available from http://grupo.iberia.es/portal/site/grupoiberia/template.PAGE/menuitem.1ea770f3a6b0e3be19736c10d21061ca/?ano_visible_recogido=2006)
- Iberia. (2007). *Third Quarter Results January – September 2007* [pdf-publication]. (Available from <http://grupo.iberia.es/portal/site/grupoiberia/menuitem.fb0f8cb434f888f6914da010d21061ca/?canalPadre=Informes+Trimestrales&anio=2007&trimestre=3&Input.x=38&Input.y=8>)
- Iberia. (2008). *Iberia – Financial Statements and Management Reports* [pdf-publication]. (Available from http://grupo.iberia.es/portal/site/grupoiberia/template.PAGE/menuitem.1ea770f3a6b0e3be19736c10d21061ca/?ano_visible_recogido=2007)
- Iberia. (2008). *Interim Management Report January – September 2008* [pdf-publication]. (Available from <http://grupo.iberia.es/portal/site/grupoiberia/menuitem.574eeefb30d7d3be19736c10d21061ca/>)
- ICAO. (2008). *ICAO Annual Report of the Council 2007, Doc 9898* [report]. Montreal. (Available from <http://www.icao.int/annualreports/>)
- ICAO. (2008). *About ICAO*. Retrieved 2008-11-20 from http://www.icao.int/icao/en/m_about.html
- Investopedia. (2008). *The Industry Handbook: The Airline Industry*. Retrieved 2008-10-06, from <http://www.investopedia.com/features/industryhandbook/airline.asp>
- Jaffe, J., Jordan, B.D., Ross, S.A., & Westerfield, R.W. (2008). *Modern Financial Management* (8th ed.). New York, NY: McGraw-Hill/Irwin.
- Johnson, P. (2003). Air transport. In P. Johnson (Ed.), *Industries in Europe* (p. 260-286). Cheltenham, UK: Edward Elgar Publishing Limited.
- Luftfartsstyrelsen. (2008). *Flygtendenser 02/2008* [pdf-publication]. (Available from http://www.luftfartsstyrelsen.se/templates/LS_InfoSida_70_30_39586.aspx)

- Luftfartsstyrelsen. (2008). *Luftfartsstyrelsens omvärldsbevakning 2008* [report 2008:23 ISSN 1652-9707]. (Available from <http://www.transportstyrelsen.se/Publikationer/Luftfart/Marknad-och-omvarld/>)
- Luftfartsstyrelsen. (2008). *Flygets utveckling 2007* [report 2008:5 ISSN 1652-9707]. (Available from http://www.luftfartsstyrelsen.se/templates/LS_InfoSida_70_30_38138.aspx)
- Luftfartsstyrelsen. (2008). *Om Luftfartsstyrelsen*. Retrieved 2008-12-19, from http://www.luftfartsstyrelsen.se/templates/LS_InfoSida_70_30_38853.aspx
- Luftfartsverket. (2003). *Civil aviation 2002* [SIKA report ISBN 91-89586-30-1]. (Available from http://www.luftfartsstyrelsen.se/templates/LS_InfoSida_70_30_38138.aspx)
- Lufthansa. (2005). *Glossary – Aviation Terminology*. Retrieved 2008-11-28, from http://www.lufthansa-financials.de/servlet/PB/menu/1017309_12/index.html
- Lufthansa. (2008). *About us; Business segments*. Retrieved 2008-11-26, from http://konzern.lufthansa.com/en/html/ueber_uns/geschaeftsfelder/index.html
- Lufthansa. (2008). *About us; History*. Retrieved 2008-11-26, from http://konzern.lufthansa.com/en/html/ueber_uns/geschichte/chronik/index.html
- Lufthansa. (2001 - 2008). *Lufthansa Annual Report 2000 - 2007* [pdf-publications]. (Available from <http://konzern.lufthansa.com/en/html/presse/downloads/publikationen/index.html>)
- Lufthansa. (2007). *Lufthansa 3rd Interim Report January – September 2007* [pdf-publication]. (Available from <http://konzern.lufthansa.com/en/html/presse/downloads/publikationen/index.html>)
- Lufthansa. (2008). *Lufthansa 3rd Interim Report January – September 2008* [pdf-publication]. (Available from <http://konzern.lufthansa.com/en/html/presse/downloads/publikationen/index.html>)
- O’Connell, F. J. & Williams, G. (2005). Passengers’ perception of low cost airlines and full service carriers: A case study involving Ryanair, Air Lingus, Air Asia and Malasya Airlines. *Journal of Air Transport Management*. 11(2), 259-272.
- Paten, R and Davidson, B. (2003). *Forskningsmetodikens grunder – Att planera, genomföra och rapportera en undersökning*, 3rd edition. Lund: Studentlitteratur.

- Porter, M. (2008). The Five Competitive Forces That Shape Strategy. *Harvard Business Review*. 86(1), 78-93.
- Ryanair. (2008). *About us: History of Ryanair*. Retrieved 2008-11-12, from <http://www.ryanair.com/site/EN/about.php?page=About&sec=story>
- Ryanair. (2001). *Annual Report & Financial Statements 2001* [pdf-publication] (Available from <http://www.ryanair.com/site/EN/about.php?page=Invest&sec=download&ref=2001>)
- Ryanair. (2002). *Annual Report & Financial Statements 2002* [pdf-publication] (Available from <http://www.ryanair.com/site/EN/about.php?page=Invest&sec=download&ref=2002>)
- Ryanair. (2003). *Annual Report & Financial Statements 2003* [pdf-publication] (Available from <http://www.ryanair.com/site/EN/about.php?page=Invest&sec=download&ref=2003>)
- Ryanair. (2004). *Annual Report & Financial Statements 2004* [pdf-publication] (Available from <http://www.ryanair.com/site/EN/about.php?page=Invest&sec=download&ref=2004>)
- Ryanair. (2005). *Annual Report & Financial Statements 2005* [pdf-publication] (Available from <http://www.ryanair.com/site/EN/about.php?page=Invest&sec=download&ref=2005>)
- Ryanair. (2006). *Annual Report & Financial Statements 2006* [pdf-publication] (Available from <http://www.ryanair.com/site/EN/about.php?page=Invest&sec=download&ref=2006>)
- Ryanair. (2007). *Annual Report & Financial Statements 2007* [pdf-publication] (Available from <http://www.ryanair.com/site/EN/about.php?page=Invest&sec=download&ref=2007>)
- Ryanair. (2007). *Half Year Results 2007* [pdf-publication]. (Available from <http://www.ryanair.com/site/EN/about.php?page=Invest&sec=download&ref=2007>)
- Ryanair. (2008). *Annual Report & Financial Statements 2008* [pdf-publication] (Available from <http://www.ryanair.com/site/EN/about.php?page=Invest&sec=download&ref=2008>)
- Ryanair. (2008). *Half Year Results 2008* [pdf-publication]. (Available from <http://www.ryanair.com/site/EN/about.php?page=Invest&sec=download&ref=2008>)
- Sandberg, C. (1993). *Ekonomianalys – Analysmetoder och Nyckeltal*. Jönköping: Akelius.
- Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research Methods for Business Students* (4th ed.). Essex: Pearson Education Limited/Prentice Hall.

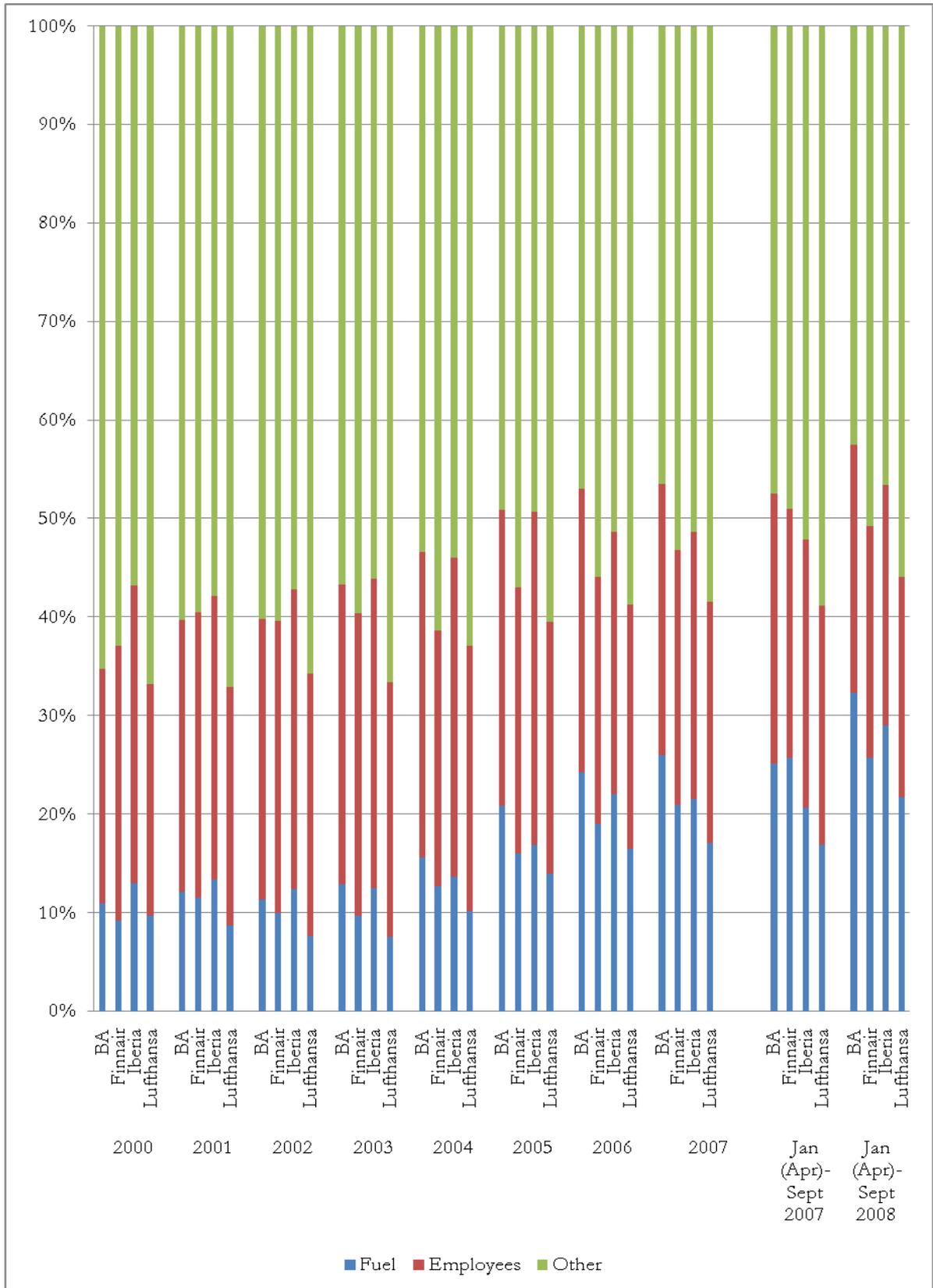
- Tarry, C. (2008). *Analyst viewpoint – Industry crisis: Which route to salvation?* [pdf-publication].
(Available from
http://www.iata.org/whatwedo/economics/outside_views.htm)
- Yahoo.finance.com. (2008). EUR to USD. Retrieved 2009-01-03, from
<http://finance.yahoo.com/q?s=EURUSD=X>
- Wramsby, G. & Österlund, U. (2004). *Företagets finansiella miljö* (11th ed.). Borås: Wramsby/Österlund förlag.
- Östlund, A. (2008, August 14). Situationen inom flygindustrin är allvarlig. E24. Retrieved 2008-10-11, from
http://www.e24.se/branscher/tjanstforetag/artikel_630635.e24

Appendix 1 – Development of US Dollar against Euro

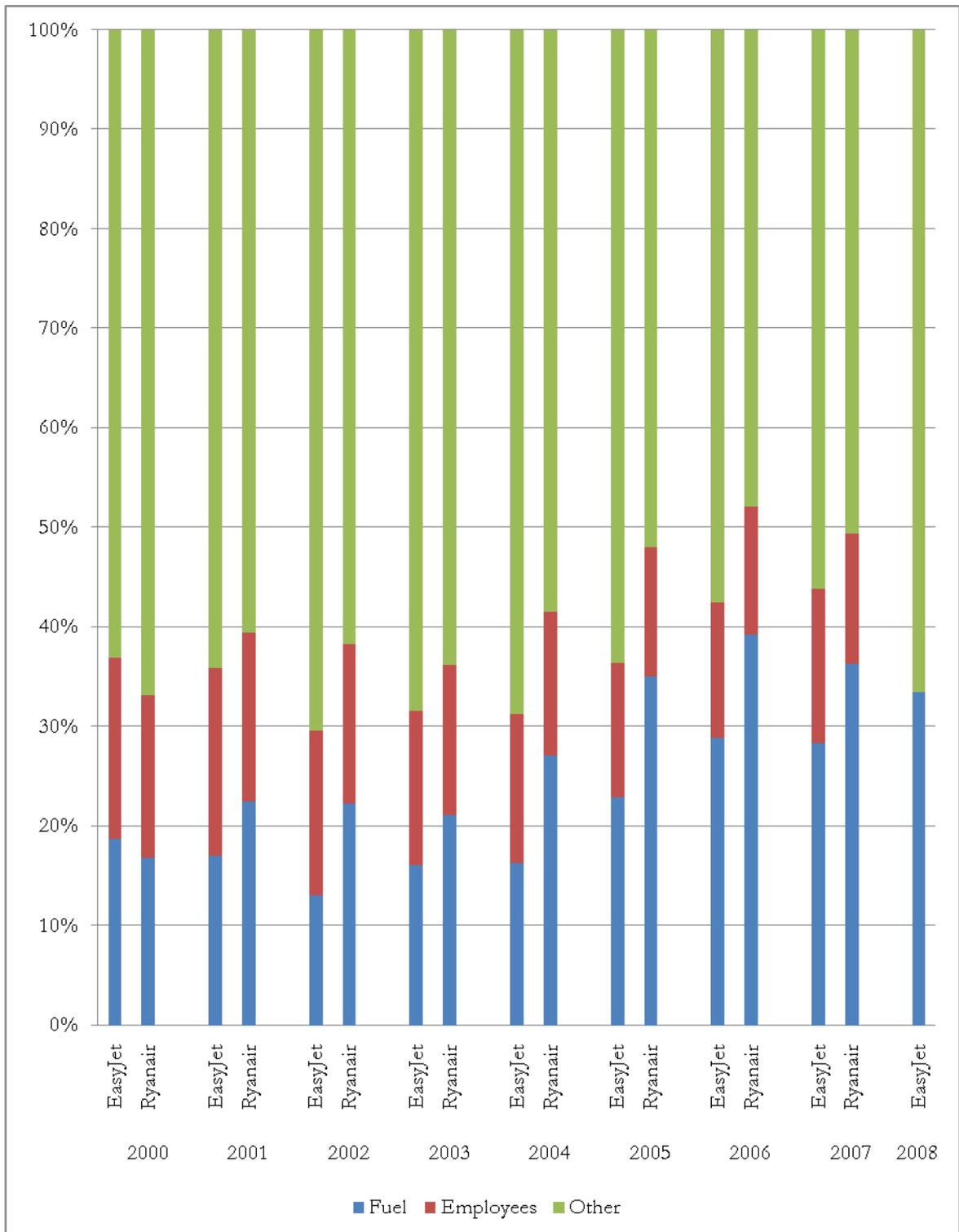


Euros to US Dollars. *EMA(360) – Exponential Moving Average for 360 days. (Yahoo.finance.com, 2008)

Appendix 2 – Cost structure, traditional airlines



Appendix 3 – Cost structure, LCCs



Appendix 4 – Interview questions

Dessa frågor rör specifikt den Europeiska marknaden.

1. I vilken stadium är krisen?
2. Är krisen över nu när oljepriset gått ner igen? (Eller handlar det om mycket mer än bara oljepriset?)
3. När kan flygbranschen tänkas återhämta sig?
4. Hur lång fördröjning är det mellan att oljepriset stiger/sjunker innan flygbolagen påverkas?
5. Vilka faktorer är det i den närmsta framtiden som kommer ha ett stort avgörande för hur flygindustrin kommer att te sig?
6. Vad finns det för likheter och skillnader mellan dagens kris och kriserna efter 11 september 2001, SARS och Irakkriget?
7. Vilken typ av aktörer (kundsegmentinriktning, ålder på bolag, investeringsstrategi osv.) har klarat och kommer troligtvis att klara krisen bäst/sämst?
8. Vad kommer att karaktärisera den Europeiska flygbranschen de närmsta åren?

Appendix 5 - Chris Tarry, Aviation Industry Research and Analysis (CTAIRA)

Chris Tarry was voted UK's leading aerospace analyst in 1984. The same year he also became an engineering analyst, and during the same period frequently ranked in the top three European transport analysts. Today, Tarry is engaged in many things. Besides writing a monthly column for Airline Business and often making statements in different media, he is an advisor on aviation issues to government departments and the UK Parliament on issues of air transport arrangements for the Royal Family and senior Government ministers (IATA: Chris Tarry - CTAIRA, 2008).

Tarry often gives lectures at Cranfield, Cambridge University, Oxford University and the London School of Economics and he also presents conferences across the world (IATA: Chris Tarry - CTAIRA, 2008).

To provide research, consulting services and advice on and to the transport and aviation industries in areas of business planning, Tarry established, in 2002, Aviation Industry Research and Analysis (CTAIRA). Covering a variety of strategic, financial and market related issues, CTAIRA provides services to airlines, manufacturing companies, government bodies, airport owners and banks and other financial institutions (IATA: Chris Tarry - CTAIRA, 2008).

Appendix 6 - Helen Jakobsson, the Swedish Civil Aviation Authority (Luftfartsstyrelsen)

Helen Jakobsson is an analyst at the Senior Research and Investigation Officer Market Analysis Section at the Swedish Civil Aviation Authority (Luftfartsstyrelsen) (Luftfartsstyrelsen: Om Luftfartsstyrelsen, 2008).

The Swedish Civil Aviation Authority (Luftfartsstyrelsen) has many tasks, and the most important are to facilitate a safe, cost-effective and environmentally responsible civil aviation system. The authority has in large terms a responsibility for civil air traffic in Sweden. More specifically this means, developing rules, inspection, issuing permits, supervising civil air traffic with emphasis on safety and also investigations and cooperations with international agreements regarding issues of air transportation (Luftfartsstyrelsen: Om Luftfartsstyrelsen, 2008).

All activities exercised by the Swedish Civil Aviation Authority (Luftfartsstyrelsen) are financed by user fees (Luftfartsstyrelsen: Om Luftfartsstyrelsen, 2008).

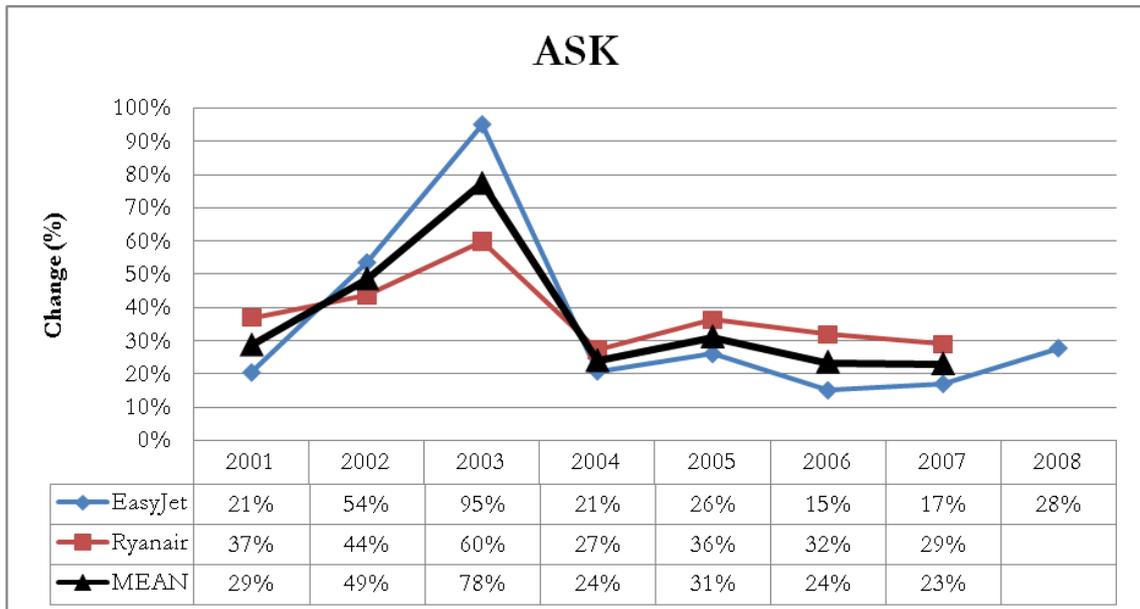
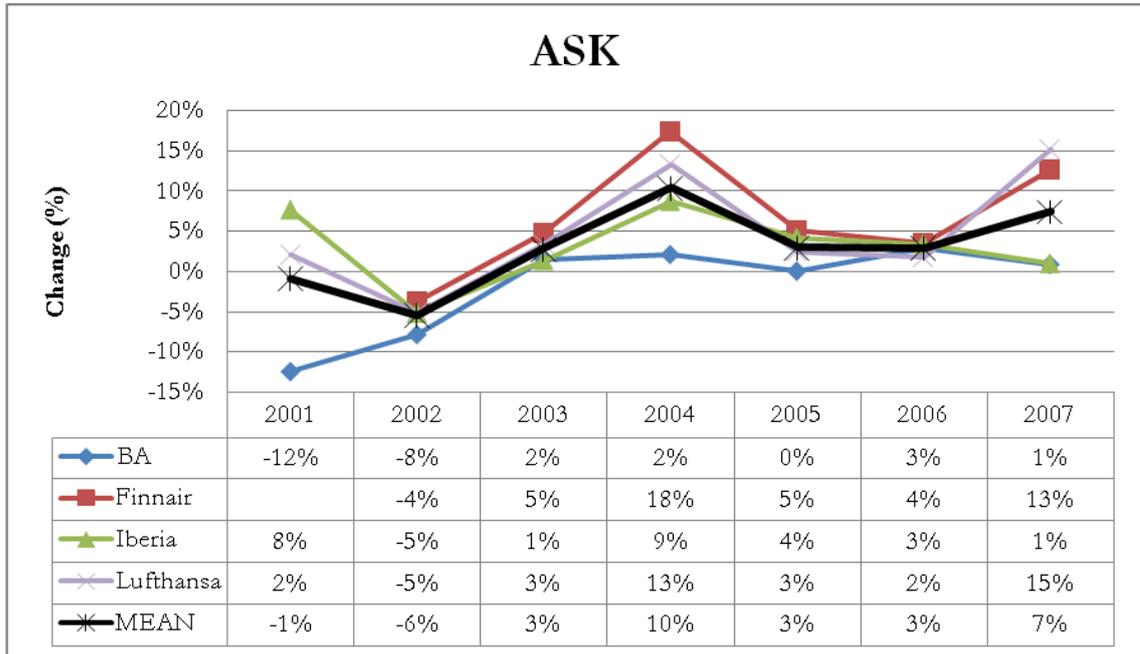
Appendix 7 - Anders Lidman, Aeropol

Anders Lidman is the owner and CEO of Aeropol AB, an aviation consultant company. Lidman has 30 years of experience in air law, aeropolitics, maritime law governmental regulations, airline scheduled operations and cruise ferry operations and is today considered a senior legal aviation expert. Lidman was earlier the managing director for a Swedish regional airline. He has several years of expertise in inventory control and yield management, reservation systems, logistics and route planning, commercial, scheduled airline operations and lease & purchasing of aircraft (Aeropol, 2008).

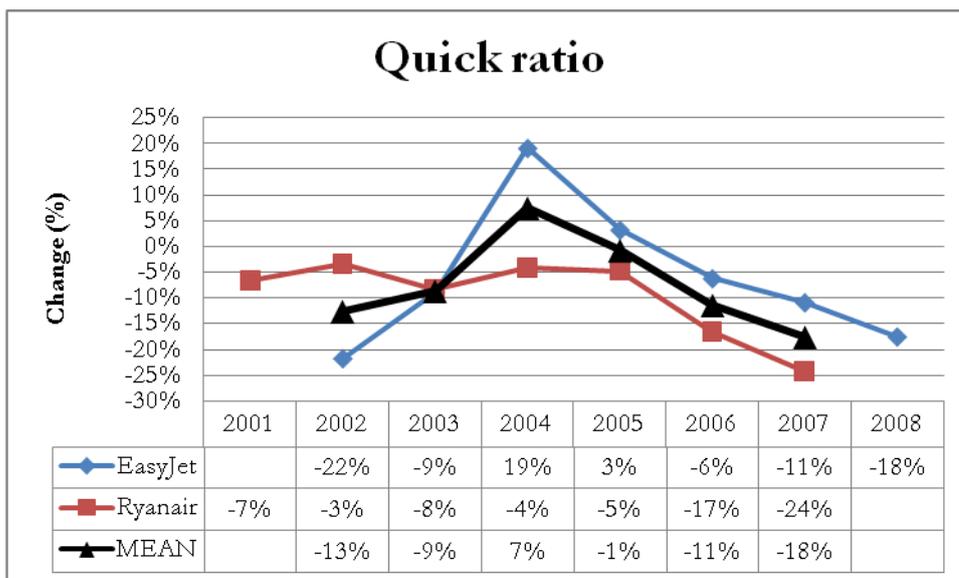
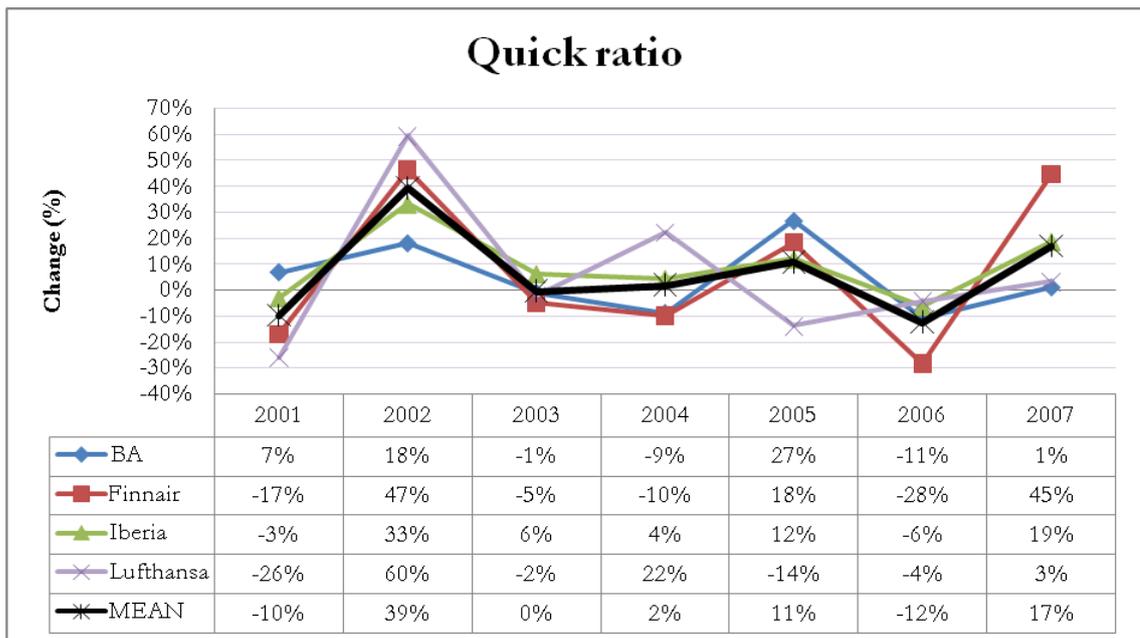
Between years 1993 to 1996 Lidman was Product Manager, Legal Advisor and Board Member of Baltic Express Line, that arranged cruises around the Baltic Sea and the Canary Islands (Aeropol, 2008).

During eight years Lidman was guest teacher in aviation law at Göteborg Business School. Lidman has also during his career worked with low cost upstart airlines in Scandinavia, Åland and Iceland and developed business plans (Aeropol, 2008).

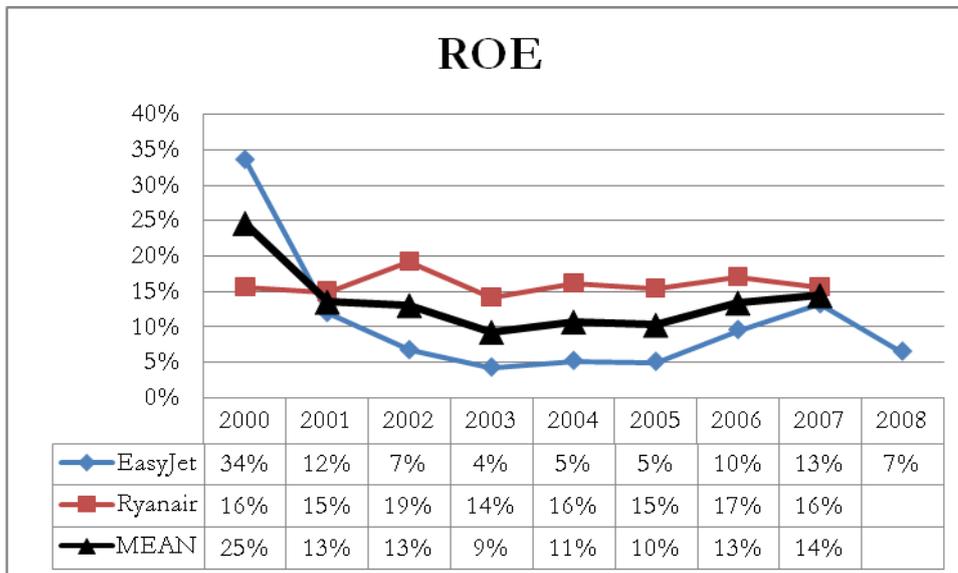
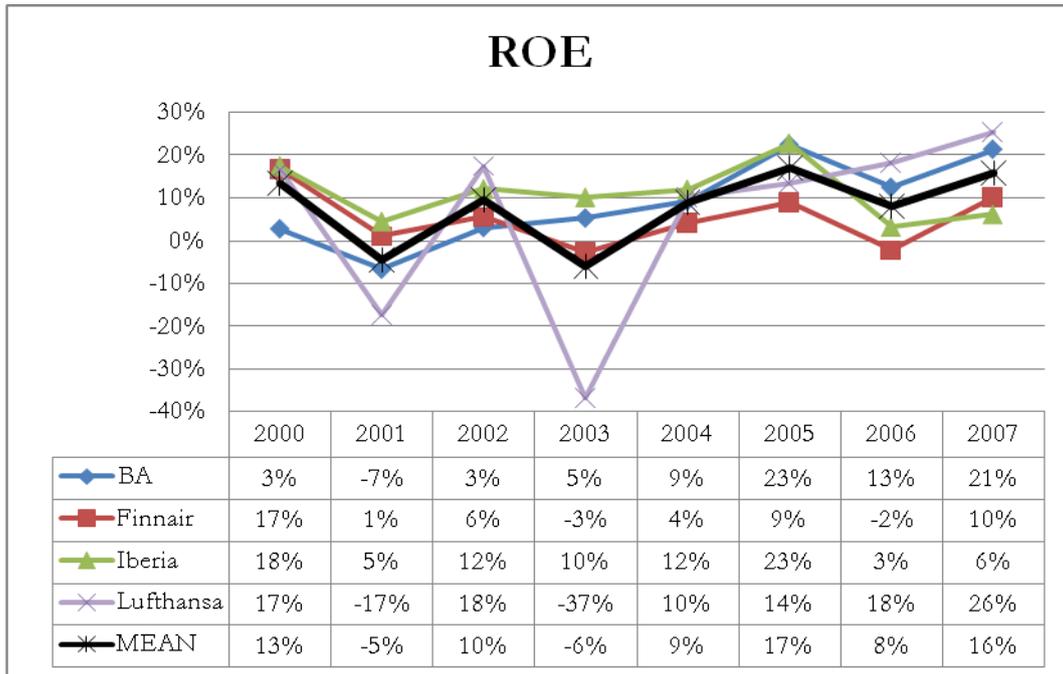
Appendix 8 – ASK



Appendix 9 – Quick ratio



Appendix 10 – ROE



Appendix 11 - Calculations of financial ratios

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$\text{E.g. Current ratio}_{\text{Finnair2007}} = \frac{3148}{3244} = 0,97$$

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{Inventory}}{\text{Current liabilities}}$$

$$\text{E.g. Quick ratio}_{\text{Finnair2007}} = \frac{3148}{3244} = 0,94$$

$$\text{Debt-equity ratio} = \frac{\text{Total debt}}{\text{Total equity}}$$

$$\text{E.g. Debt-equity ratio}_{\text{Finnair2007}} = \frac{7890}{3233} = 2,44$$

$$\text{Profit margin} = \frac{\text{Net income}}{\text{Sales}}$$

$$\text{E.g. Profit margin}_{\text{Finnair2007}} = \frac{694}{8753} = 0,079$$

$$\text{ROE} = \frac{\text{Net income}}{\text{Total equity}}$$

$$\text{E.g. ROE}_{\text{Finnair2007}} = \frac{102,1}{987} = 0,1034$$
